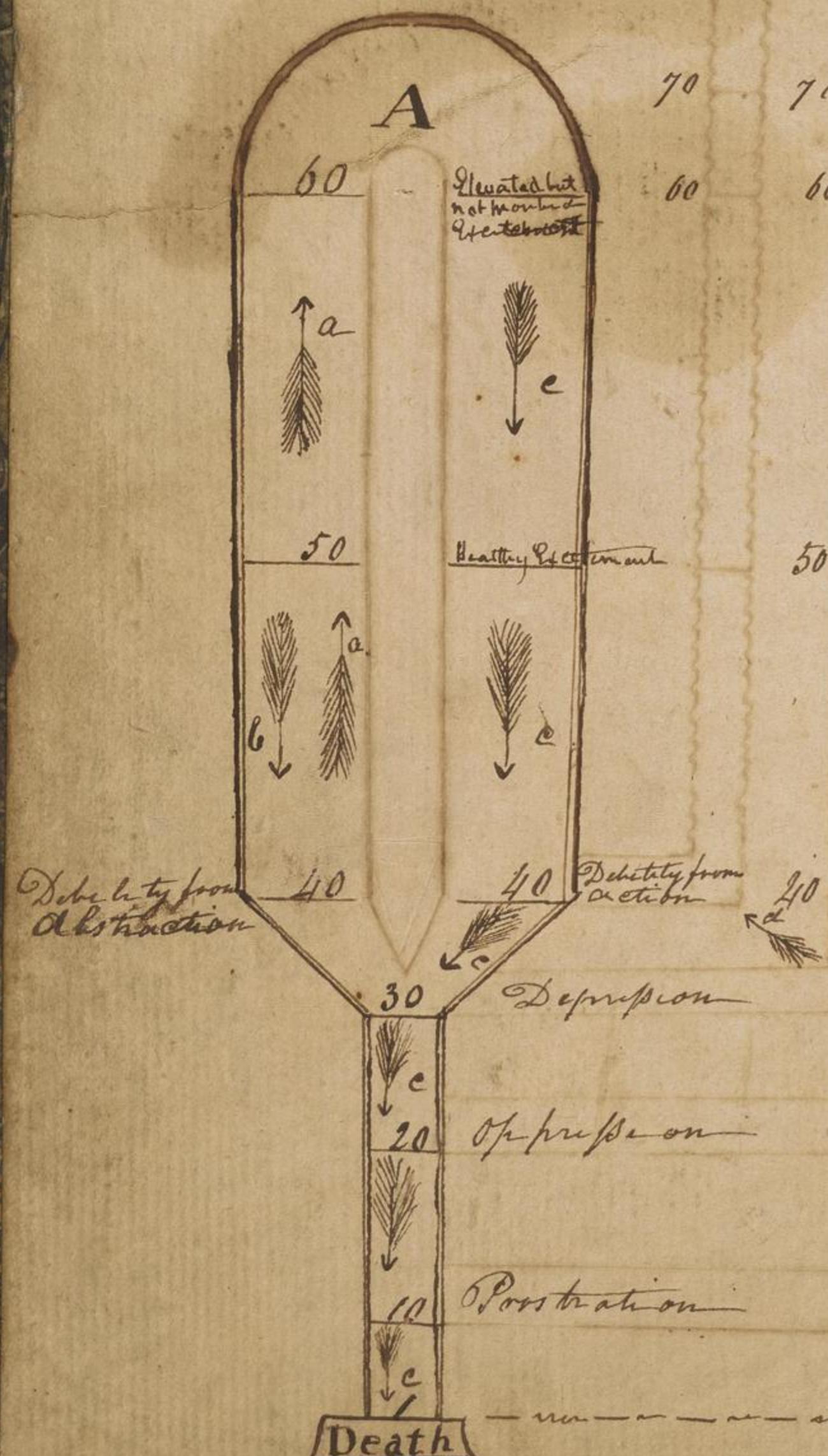


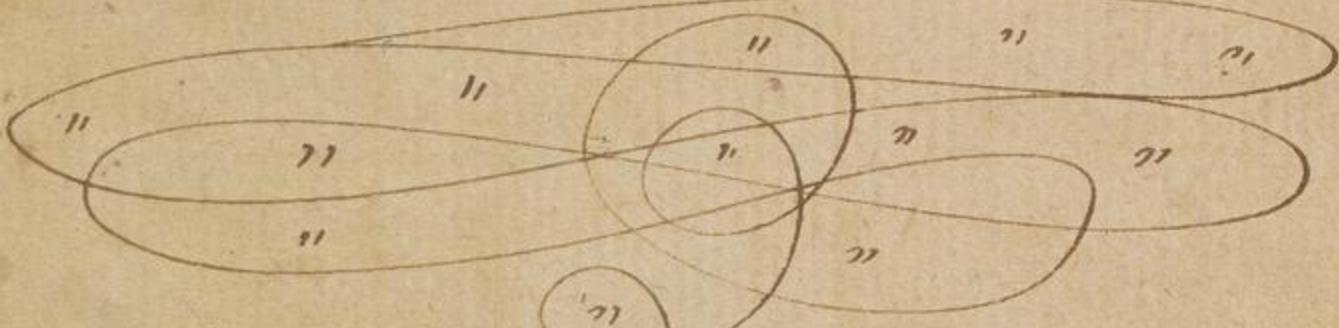
Table of Fevers



100	100	100	100	Synochus forte
90	90	90	90	Synocha
80	80	80	80	Synochule
70	70	70	70	Synochoid
60	60	60	60	Synochy Mity and Intermittent
50	50	50	50	Hectic & Typhoid
40	40	40	40	Typhus
30	30	30	30	Hilarcular
20	20	20	20	Suffocated fever
				Malignant or Adysia State of fever.
				Gangrenous State of Fever

John Maxwell's
Manuscript Notes
of the
Lectures
Doctor Benjamin Rush
Delivered in the
University of Pennsylvania.

1807-8



References

A Table of the remote, predisposing, exciting and proximate Causes of Ordinary or common fevers.
The straight lines A denote the Blood vessels. The arrows a, a, denote the action of Stimuli which induce elevated Excitement.
The arrow (b) denotes the abstraction of Stimuli, & the reduction of the System thereby to the debility of Abstractions.
The arrows c, c, c, e, e, e, denote the action of Stimuli, in producing according to their force, the debility of Action, depression — Oppression — prostration & death. The arrows d, d, denote irritants, which by acting upon the Excitability of the Blood vessels; suddenly accumulated by the reduction of their Excitement, induce Fever. The arrow (e) denotes the abstraction of Stimuli, in order to favour the System, rising into obvious & sensible fever. The arrows f, f, f, denote the necessity of powerful Stimuli to excite the Blood vessels from their torpid state. The arrows g, g, g, g, g, g, denote the necessity of still more powerful Stimuli, to raise the Blood vessels above the State of Prostration and engorgement. The curved lines denote the irregular or convulsive action of the Blood vessels in fever — with the relative force of the 13 primary forms of fever to each other & to healthy action of the Blood vessels — these relations are expressed by numbers ascending from 50 to 100, & descending from 50 to 1.

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Be wise to day; 'tis madness to defer;
Next day the fatal precedent will plead;
Thus on; till wisdom is pushed out of life;
Procrastination is the thief of time.

Young

—Ms. Coolex 89

Dob
also

1807 Push on Pathology.

December 13.

Hitherto, Gentlemen, we have considered the human body in a healthy condition; we must now reverse this pleasing scene, and view it in a morbid state. As soon as man was expelled from paradise, he lost the image of his Creator, and became liable to disease and death. Every element seemed to conspire against him, in order to work his destruction. Deluge is supposed to assist in shortening the life of man by rendering the air impure.

That life is a forced state is no less consonant in to Religion, than to Reason. It is the result of a continual strife. In entering upon the considerations of Diseases incident to man, let us not arraign the goodness of God. Diseases are blessings in disguise. They are intended to answer various useful purposes. They induce us to the study of Anatomy. This study, so repugnant to our feelings at first, is rendered agreeable by habit, or necessity. Diseases lead us to the study of Physiology. By knowing the functions in the morbid state, we are naturally led to the investigation of the functions of the body, in its state of health. They also stimulate us to the study of the animal, vegetable, and mineral Kingdoms in order to discover remedies for our diseases; lastly they (diseases) give us an opportunity of exercising Charity, that most noble of the Christian virtues.

As the intensity of cold in winter increases, the pleasure we enjoy in a temperate Spring — As disease — ~~and~~ adds charms to light, — As deformity renders ~~the~~ the charms of beauty more captivating, — As evil ~~at~~ leads us to good, & as error leads us to the discovery of truth; so, Disease is necessary to make us duly appreciate the inestimable blessings of Health. Disease improves virtue. It reconciles us to death — nay, from Disease death becomes desirable. It gives us a proper relish for pleasure. It not only improves, but creates virtue; and the virtue thus created is of a passive nature. Pain also has its advantages; It promotes activity of the mental faculties, it is the harbinger of disease, it warns us to desist from, or avoid all exciting causes, and gives us notice to send for medical aid. But disease sometimes comes on without ^{the} remonition of pain, as Cancer, chronic Inflammation of the Liver, Tumors, limbs &c.

In delivering a System of Pathology I am content without a guide. Haller, Hoffman, Boerhaave & Gaubius, have all wrote upon the same subject, but none of them, however, has given us a System, except Gaubius, and his is so full of humoral Pathology, that in these days it cannot be of any great utility. I am aware, Gentlemen of the general ^{prejudice} _{against} Theory in Medicine. It has ^{been} _{been} entirely scouted from the Medical Chair

of the University of Edinburgh; but still I am
an advocate for it. — Charles the 12th of Sweden, pointing
down on a Map to a small Town which he had
taken, said, "God gave me this, and the Devil shall
not take it from me". I say, but not with so much
courage as Charles XII. "Heaven gave me a Love
for principles, & all the Powers of the Earth shall
not take it from me".

I shall divide the Causes of Disease into four parts in
Viz. the remote, predisposing, Occasional or Ex-
citing, and Proximate Cause, or disease itself. Cold is
a remote cause, it induces debility, in which the
Predisposition consists: — then if heat or any other
stimulus be applied it will operate as the Exciting
cause, & the consequence will be Morbid Excitement, which is the Proximate Cause, or Morbus ipse.

The order of Causes as here laid down, does
not always obtain. — Debility does not always re-
quire an external exciting cause to induce disease.
By Proximate cause I mean with Gaius "Ipse Mor-
bus", or Morbid excitement. Disease sometimes
occurs without previous Morbid Excitability. This
is an against argument of no inconsiderable
weight, against the doctrine of Morbid excitability
being the Proximate cause of Disease.

Debility is the universal predisposing cause
of all general Diseases. This is of two kinds, Natural,
acquired. We are all born with a greater or less
share of debility, and are of course predisposed to disease.
It is acquired by various modes of Civilised

life. Children require it by injuries received in
Parturition from unskillful Midwives. By having ^{water}
their Bodies washed in Spirits immediately after the
birth; this produces debility by inordinate Stimulus ^{indu}
They acquire it by the quality of their food, ^{tim}
which is too often of too stimulating a nature. ^{unso}
tight cloathing, such as swaddling clothes &c. ^o
the dissipation of their Motherz & Nurses, by prema-^{ach}
-ture application to study; the tyranny of their So-^{unso}
-mothers; and by their amusements. I knew a case
of Hydrocephalus internus, ^{caused} by the common, but dare ^{may}
gross practice among ^{children} of standing on their Heads. ^{appli}

By temperament I mean, a natural pre-dis-^{diso}
position to disease. Galen has reckoned four Tempe-^{ble p}
-raments, viz. Sanguineous, Bilious, Melancholic
& Phlegmatic; but I make seven. viz., Sangui-
neous, Bilious, Nervous, Muscular, Phrenetic, Ali-
mentary and Lymphatic, or Phlegmatic & Cutaneous

^{Diseases also} Though I make use of the word Temperament,
yet, I object to it, it is improper, because by it is meant
a predisposition to disease in particular Systems
and I think the term Proclivity, which I
shall make use of in future, is better.

^{and 1st} Diseases of persons of a Sanguineous tem-
perament seated in the Sanguiferous System, may
be subdivided into two kinds — Pulmonary & Aortic.
In the Pulmonary the lungs are pathologically
enlarged. They may be diseased, and the docto
refuse to sympathize.

2^o In the Bilious temperament, the Liver
is naturally enlarged, & secretes an unusual
quantity of Bile. These temperaments are often
blended together. They predominate in Warm
climates. The Bilious temperaments predominate
in Hepatitis, Cholera, and all the intestinal forms
of disease. 3. The Nerves, Muscles, and Mind have
each a particular temperament. In the Nerves,
sensation is quickened. Persons of this temperament
may be said to be all Nerves. This temperament
applies to Hystera, Hypochondriasis, Epilepsy &c.
Persons of the Muscular temperament, are remark-
able for their Strength. They possess but little ex-
citability. They enjoy repose, if I may so speak only
in active employments. Hercules was renowned
for body strength; but not for the Strength of his
Mental powers; such people may be said to be
all Muscle. 5. In persons of the Phrenitic tem-
perament, or what I should all along have termed, predi-
position, there exists undue excitability & quick-
perception, all the operations of the mind are per-
formed with Celerity and force. This predisposition
always exist in those persons, who are liable to be
affected with Head aick, Hystera & Epilepsy. — Ce-
phalic occupies the lower part of the Brain, while the big
Phrenitic occupies the upper. Persons possessing this
predisposition are generally short lived, — Hence
the saying of old women that "Children of uncomplis-

most talents never live to scratch a gray Head.
They have been aptly compared to a sword too long
for its Scabbard, which cuts its way through. If they
are deprived of Books, delirium or Mania is the
consequence. They feel pain, when not engaged in
reading or interesting Conversation — such may
be said to be all minds. 6. Alimentary predisposition
may be subdivided into Gastric and Intestinal.
7. In the Lymphatic or Phlegmatic, the Lymphatic
System performs its functions slowly & imperfectly
from debility. The Cutaneous predisposition exist
in such persons as are affected with Inflammation
on the Skin from slight Irritations.

The same remote Cause acts differently
according to the difference of predisposition.
This is exemplified by a case related by Dr.
of four young men, who partook equally of bio-
lent exercise under equal circumstances. They
were all seized with different diseases, at nearly
the same time, because their predispositions were
different. The very same Epidemic often appears
under different forms in different people, for
the very same reason. From these facts it will
appear evident, that no general rule for the
preservation of Health will universally hold
good. Different predispositions succeed
each other, in the same person, at different
times. They vary with age & season, and an

John
Adams

Sometimes connected, thus the Nervous & muscular
Predisposition predominates in Infancy & Childhood,
hence Convulsions &c. In Middle age & youth
the Arterial & Hepatic; hence Inflammatory and
Bilious fevers, peculiar to those ages. In old age
the Nervous & Cephalic predisposition reign - hence
Vertigo, Head Ach &c. The Sanguineous predis-
position prevails chiefly in the Spring; the Bilious
in Summer; the Nervous in Autumn; and the
Phlegmatic in Winter. Predispositions are often
Hereditary, descending from Father to Son through
many Generations; and may be changed by inter-
marriage. The reason why the diseases of the
Greeks were more uniform, is, because that peo-
ple were more insulated than any other Nation.

In prescribing for a patient we should never
lose sight of his Predisposition. We should always
accommodate our prescriptions to their peculiarities.

I have now a patient under Hyperchondriac
- cal patient under my care, whose bowels are so in-
- vitable or not to admit the use of purgatives. I
bleed him. The Sanguineous Predisposition re-
quires Copious Bleeding: the Bilious Copious
Purging; The Phrenetic, abstraction from Study,
The Muscular the most powerful Sedatives.

Not only Life, but Health is a forced state, per-
fect Health is as rare as puff of virtue or Reason.
But do not be disengaged, Gentleman, at this dis-
tressing view. One part may be debilitated, while

another ~~pop~~ ^{on} up an unusual degree of Strength. A Hypochondriacal patient may have vigorous, ~~weak~~ Lymphatics. Hysterical women discharge a ~~at No~~ ^{ing a} Postmenstrual quantity of Urine Oxide.

Debility is acquired by all the causes which ~~tend~~ ^{to} diminish natural excitement at periods ~~too~~ ^{ing C} posterior to Childhood. It may be done before ~~re~~ ^{ty w} producing the excitement, & expending the ~~Ex~~ ^{Ex} citability by unusual stimuli, or in other words ~~is b~~ ^{disab} by suffocating it.

December 15th 1807. — Health consists in a ~~due~~ ^{Deb} ^{to pro} equilibrium between Excitement and Excitability. Stimuli when too powerful, produce Debility. This is Scal Debility from action. It is ^{the same as the} Indirect Debility of Brown. — When the natural stimuli are diminished, that debility, which Scal Debility from abstraction is produced. This is Dr. Brown's direct Debility. You see that the two extremes meet in a point.

When Excitement is sudden by reduced ^{the} Excitability is suddenly accumulated; but when the reduction is gradual, the Ex citability is expended. There is a great difference between Debility suddenly induced, & that which is brought on gradually. For the first stimuli are injurious, very, even fatal. in the last they produce beneficial effects.

In the Morning the Excitement is at 40° at ^{When}

at Noon, 50° and at Night 40°, so that we are
warmer in the Morning, and at Night, than
at Noon. Hence it is that the Air of the Morn-
ing and Evening is the most apt to produce
Disease, especially when aided by an Exci-
ting Cause. There is a certain range in debi-
tity which resists disease & happy for Mankind,
it is so, otherwise whenever debility is induced,
disease would be unavoidable. Old People
& Children are soonest debilitated. Even the
common operations of the Mind are sufficient
to produce depression & Disease.

When Stimuli are long continued they ex-
pand the Excitability, and Disease is seldom
the consequence; but disorder is produced.—
Debility is an unit, as also depression. Persons la-
bouring under Debility, are capable of Exercise;
but Depression forbids action: It appears to form
the connecting Medium between Debility & Disease.
Debility is not Disease. Alarms &c sometimes
induces depression, without intervening Debility.
Depression is most frequent, about Christmas,
when according to the language of the Celebra-
ted Chile.

"Man, falsely grateful at the sacred feast,
"So do God honor makes himself a beast."

When you go out in the Morning, or Evening, be

careful to avoid all exciting causes. Is the Systeme
unduly excited by the Miasmata floating in the
Blood-veps? Be cautious of the least excess of Stim-
ulus (in this condition) in Wine or Exercise. Are
you Seized with Signs of Depression? Pause, for you
are on the threshold of Disease. When labour is
constant, disease is avoided — because the Exci-
tability is exhausted, & there is no sickness none
remaining for important Matter to act upon. There
is no sickness during Harvest; but as soon as it is
over, disease begins to appear, — because the Ex-
citability which was expended is renewed. The Exci-
tability accumulates before the Exertments and
any Irritation may produce Disease.

Physicians seldom take cold when constantly employed. If employed till midnight they escape sickness; but if after a few hours sleep, they go out, they generally feel the effects of it. Our constant care should be to preserve a due degree of Excitement, by our dress, diet, Exercise, &c.

It is not always necessary for External Stimuli to act on Debility from Abstraktion, in order to produce Disease. — Convulsions sometimes arise in Consequence of the System and denly losing its equilibrium. The Electric Rod does not more certainly attract lightning from the Clouds, than Debility invites —

Depression, and Depression, Disease. Lord Cow-
wallis was heard to observe that during his Cam-
paign in the Southern States, he had never encamp-
ed half an hour, before the weakest part of his
Encampment was attacked by Gen. Harry Lee;
just so it is with Disease & Debility, Gentlemen,
Diseases are all Harry Lee's. They always dis cover
some weak part & there make their attack. —

Exciting Causes however diversified are all an Unit
all Stimuli. Fire is produced by various causes; but
it is the same, whether produced by friction or per-
cupion. Disease consists in Morbid Excitement, not
Excipie; for Excitement may be excipie & not Mor-
bid. There is but one Disease! I repeat it, Gen-
tlemen, there is but one Disease! I again repeat it,
— There is but one Disease and that is Morbid
Excitement. Neither Gentlemen! is there more than
one Exciting Cause, and that is Stimulus. — Disease
is always partial. — I know of no general disease.
It may occupy several parts at once; but not the
whole System. There may be Disease without pain
but when there is pain, there is always Disease. The
worst of obstructions sometimes take place without
pain. The Liver has been known to suppurate with-
out the protraction of pain. If the Excitement
occupied the whole system at one time, it would
be in a state of perfect health. I say again

Disease is an unit. No matter where it is seated, still it is Morbid Excitements. It has been objected to this Theory "that disease may exist without Morbid Excitement attending it. But these are not Diseases — they are only the effects of Disease, which they are what I call disorderz. An example of this may be adduced, for instance, as in Schirhous Tumours, Inflammations &c. These are only the effects of Morbid Excitements.

As Health is the result of general Excitement, so Disease depends upon partial Excitement. — Brown has very improperly confounded debility with Disease, when it is only a predisposing Cause. — That Debility is not Disease, is evident from the well known facts, that it exists in children, old people, who are not in a Disease State. —

You see, Gentlemen, how widely I differ from Dr. Brown. He admits that there are two kinds of Disease viz. Sthenia & Asthenia. I say there is but one. I have no Asthenic Disease. The plan of Cure laid down by him, is almost entirely stimulant. Mine is always, first depletive in proportion to the violence of the Case, & then proper tonics.

December 16. 1807. I might strengthen this Theory by tracing its Analogy to Physical Evil. Storm ~~is always~~ well as Disease is an unit. Whether it be accompanied with a North Wind, with

an East wind, South or West wind; with
rain, Hail, or Snow, or all of them; it is still a
Storm, and depends on the same cause, viz. Morbid
action in the atmosphere. I might still go
further, and trace its analogy to Moral Evil.
We all come into the world with a greater or
less propensity to vice. From Morbid Excite-
ment, Nature produces various forms of disease
1st, Convulsion, as Tetany, Epilepsy &c. The Mus-
cles being chiefly affected. 2. Spasms, as in Colic,
Asthma, Cramp &c. There are two species of Spasm,
viz. Tonic and Clonic. The first is continued, the
last is accompained with intermissions. 3rd. Ex-
ternal heat. To this the internal parts & skin.
4th. Itching. The skin about the Navel, pudenda
& Arms, are particularly disposed. 5th. Auras—sudden
Shocks attended with pain, occur in the Breast,
Head, & Limbs; what the French call "le Doloreau"
I call it "Aura Dolorifica" — Aura Antelithica.
6th. Supplicated Excitements. Here Excitement is con-
centrated to one part. An Absence of Pain and
of Pulse attend it. This is the most dangerous
form of Disease. The Brain & Lungs are most
commonly the seats of this form of Morbid Ex-
citements.

I would not be understood to limit Morbid
Excitement

the Experiment to these forms. But were its varieties more numerous than they are, yet they would all of them have a common cause. Fire appears in very different forms, viz. in red, white, & blue flame. Again it appears without flame, it assumes different actions, viz. in Melting, Softening, Hardening, Calcining, evaporation, vitrifying, fusing &c. Yet we do not call it red fire, &c. Melting fire, softening &c. — We see something like the effects of Fire in Disease. The Skin assumes various colours, white, red and blue. There is something like Sparks in Auras. Morbid Excitement and fire are however, not the same. I only infer from the Unity of Fire the Unity of Disease. The Morbid forms above mentioned, are sometimes mixed and often succeed each other. We have seen a hail, rain & snow & storm all at once, & we have seen a storm of rain succeed a storm of hail or snow. But morbid ~~Experiment~~ action in the atmosphere is the cause.

From all that has been said, Gentlemen, you will see the impropriety of affixing a Specific, or etiological name to every possible grade of Experiment. It is my aim to abolish this Idolatry in Medicine, as it certainly retarded Medical knowledge. This is the School from which shall flow Health & Happiness to every part of the World.

All the Articles of the Materia Medica are
not required to cure Morbid Excitements. Disease is
unit, & a few remedies will answer. If every disease
had a Different proximate cause; Different
remedies would be required. of course. — But
this is not the case.

Is debility the predisposing cause of all gene-
ral diseases? Remove it before disease is formed,
by rest and proper Medicines, impregnated with a know-
ledge of this fact, I have often, often prevented
Disease. — Does Depression supervene? remove
it by a small Bleeding, Abstinence, & a purgative.
Is an exciting cause always necessary to produce disease?
Place your patients beyond the reach of exciting
causes. — Is Disease partial? Equalize Experi-
ment by abstraction. Is disease an unit? is it local
in the Pleura? & does Depletion cure it? The same
remedy in other parts of the body will answer. — Is
small pop rendered mild by previous preparation?
So may other diseases. — Can we prevent Suppuration in
the Liver by Salivation? so, also we can prevent
it in the Lungs in Consumption, by exciting a visc-
erous disease. Does Abstinence mitigate the bio-
lence of the small pop? so also will it in Measles,
Yellow Fever &c. Is the same state of the system always
attended in the same state of the pulse? The same
remedies must always be exhibited in similar states

of the pulse in all Diseases. I do not mean the same force of the same remedy.

My Theory is in fact, no Theory at all. - It is a History of the Phenomena of Disease. It is a chain of facts obvious to the Senses. It limits the number of remedies. It circumscribes the Materials Medicæ within narrow limits. It banishes the Liver-Worts, Spleen-Worts, Lung-Worts, Brain-Worts, &c. The extinguish fire in all its forms by abstracting Air, throwing Water upon it. So can we destroy or extinguish disease by depletion, (i.e.) abstraction.

The same knowledge in Navigation, which will carry a man to the West Indies, will carry him to all parts of the world; and the same knowledge which enables you to cure one form of Disease, will lead you, if a little modified, to cure the whole. —————

You, who have brought with you the Theories of Brown & Cullen will loose a great deal by exchanging them for mine. For one Theory which I give you, Brown would give you two, & Cullen twenty. I shall rob you of a parcel of money, which only serve to perplex you. — In short, Gentlemen, I'll empty your pockets of a parcel of jingling Centz, & fill them with Silver Dollarz.

December 17. 1807. In Pneumonia ab Tha. the Blood vessels do not sympathise with the

Lungs, they are so engorged, as not to take on inflammatory action. Equalize Morbid Action by Abstraction, & then the vessels will heat to the time of Inflammation.

We have said that Pathology is a Science that treats of the Causes, Seats, & Signs of Disease. Having treated of the Causes we now come to treat of the

Seats of Disease.

If the Doctrine I have delivered be correct an exact knowledge of the Seats of disease, is not very necessary. Some diseases may be called dumb. The Liver sometimes decays without fever or pain. Certain sensations produce Signs of Disease in parts of the body remote from that part, in which the disease is seated. Doct. Johnson calls this an intercommunication of sensation. How many diseases of the Brain are induced by diseases of the Stomach, & vice versa? Great errors often occur in forming a judgment of the Seats of Disease. I once attended a Lady, who laboured under almost constant vomiting, and black bile was discharged from her bowels. Her Menses were regularly evacuated. Her disease was supposed to be seated in her Stomach & Bowels. After her death, I obtained leave to open her body; I found that the greater part of her Uterus was Ichorous; Her Stomach & Intestines being apparently in a natural state. — I knew a case of a man, who had a violent pain in

his right Kidney, supposed to have been caused by the presence of a stone. On Dissection, the right was found perfectly sound, while the left contained a large stone. These cases prove that we cannot with certainty ascertain the seat of disease at all times.

But will not Dissection give us a knowledge of the seat of disease? No, I would not be understood to dissuade you from frequently dissecting Morbid Bodies. I have read Morgagni, Licentands, & Bailey's Morbid dissections with Instruction. I do not entirely reject the knowledge of the seat of disease. When Inflammation is seated in the Brain, we should know it soon; for it requires more prompt relief, than when it is seated in the Lungs. Is there no sign of internal disease except pain? In both arms (— holding up his arms to the Claps) there stands a Centinel, who is a faithful reporter of internal affections. But if the pulse daily, what then have we to guide us? A sense of heat, dryness, the state of the tongue &c. — The pulse is the Nasometer. It is the dial plate of the System. — A knowledge of the seats of Disease, tho' difficult, is not unattainable. This knowledge is not recessed under my Theory. I have discovered the presence of Disease by the Pulse, when the patient made no complaint. I once attended a lady in what I shall call a uterine Colic. I did not know the seat of the

disease; nor did I care for it, as I knew the nature of it. I bled her ten times, punged her daily, & finally cured her. Similar instances of Ignorance & Success often occur. The whole Animal system is an Unit; & between every part of it there is an intercommunication of Sensation.

Of the Signs of Disease.

The relations, Sympathies, & Associations of a diseased body are very different from what they are in a healthy state. They differ from Idiosyncrasies. The signs of disease are different in different ~~in~~ different individual people, according to the difference of pre-dispositions. They are different also in different Clinics. Many violent forms of Disease are attended with no Pain. Pain, however, cannot exist in a painless body of disease. It is not always proportionate to the disease which excites it. It is an Unit; but is attended with different Sensations, according to the part in which it is seated. In membranous parts it is dull. It is twisting in the Bowels; hence the Latin properly say "Dixi torminibus torquitus". Pain is jumping in the Teeth. Gnawing in the Bones, sore on the Scalp, after Head-ach. Shaving on the skin like a drawing knife. Biting in the Temples. It is successive & depends on a variety of morbid Excitement.

Vertigo is a sign of a predisposition to
Aphoplexy; Constitutes, to Dysentery. we are to
look for the Signs of disease. 1st In the State
of excretions, 2nd In the Tongue. 3rd In Respira-
tion. 4th In the Countenance. 5th For the
General State of the Body. 6th In the
Senses. 7th Muscles. 8th Appetite. &c. 9th For
the State of the Mental Faculties. 10th. In the
State of the Body with respect to its Heat.
But the pulse affords the most correct indica-
tions; & on it we must chiefly depend. The Blood
Vessels occupy the highest rank in the Human
System. — — —

December 18th & 19th. 1807. These days
were taken up in repeating the Lecture de-
livered on the 9th above, on the Pulse — It
is in Substance, as follows.

Different Practitioners have
depended exclusively upon the Tongue. —
the Countenance, and the Excretions, by Stret,
Stool, Urine, in forming a judgment of
diseases. — I reject none of these; but rely
principally upon the pulse. The first men who
tioned, no doubt, greatly assist in indicating
the State of the System. But the Pulse has affor-

the best claim to the title of Nosometer.

I hope that my pupils will be distinguished, wherever they go, by their particular predilection for, and attention to the Pulse.

As the Blood vessels occupy the highest rank in the system, on the Pulse we ought chiefly to depend, whenever we are to judge of the arrangement. It is to the Body, what the Dial plate & hands are to a Watch. We are to consider its natural, & then its morbid States.

In an adult, the Pulse beats from 60, to 80 strokes in a minute. Its medium is 66. But there are many circumstances, which vary its frequency. — 1st. It is influenced by age. — At birth, the Pulse is from 130, to 140. after one year, from 108, to 120. at two years, from 90, to 108. at six yrs. 80, to 100. at twelve, the same as in adults. —

2nd. The sex has an influence on the pulse. It is quicker in Females, than in Males. 3rd. Different States of Society vary the Pulse. It is quicker in Cities, than in the Country; and slower in savages than in civilized people. Of ten Indians whose pulses I examined, in the presence of Dr. Caldwell, & Dr. Fisher of Virginia; but two afforded an exception to this rule, and one

of those I found upon enquiry to have been
sitting by the fire. The other was the Son of
a Frenchman, by an Indian Mother. —
I wish you to pay attention to this remark,
Gentlemen, because it has been falsely contro-
dicted by Mons. Volney, in his view of the
United States. He says Dr. Barton was present,
which is not so, & the only Indian pulse
which Mr. Volney examined, was that of the
famous Indian Chief, Little Turtle, who
had a portion of Civilized blood in his Crasis,
and who had probably for several years, lived
in the same manner at home, as when he
broad. 4th. Sun has an influence on the Pulse.
It is quicker in short, than in tall persons. 5th.
Climate does not affect the Pulse. It is slower
in Cold, than in warm latitudes — Quicker
in Summer than in Winter. The Pulse of
the Greenlanders is 40. 6th The Pulse is dif-
ferently affected by different times of the day.
It is slowest in the morning, quickest at
noon, & slower at night. It is slower in
the sleeping than in the waking state.
I attribute its slowness at night, to a differ-
ence in the weight of the Air. Not a differ-

- mer in the Thermometric, but in Barometric, State of the Air.

Before I begin to speak of the modified State of the Pulse, I'll deliver a few Physiological propositions. 1st. The Heart possesses irritability which disposes it to contract upon the Application of Stimuli; particularly that of the Blood. It is so intimately connected with the Arterial System, as to form an integral whole; in consequence of which, the motions of one part are communicated to all the rest. It may be compared to the sensitive plant. If one leaf is touched they all fall — or more properly to the Bells worn by the Jewish Priests; one of which being shaken, they all ring in Unison. I had an opportunity of seeing this amply verified in the Case of a certain Mr. W. W. Coker. His Swelling verified in the way swelled and pressed upon the Aorta descendens. The whole System sympathized with this diminution of a principle vessel, & produced a small, contracted, & scarcely perceptible Pulse. I also attended in Consultation with Dr. Physick a Captain Hardy — His pulse was small & jerking, what I have called an Aneurismatic pulse. I enquired of Dr. Physick if there was no tumor about his Body, and

upon examination the Doct. found that he had an Aneurism in the Carotid artery. This furnishes a clue to the discovery of almost all diseases, by way of the pulse.

Is the pulse tense in acute Pneumonia? The same tension occurs in Inflammation of the Pleura, and the Membrane investing the Lungs. Is the pulse soft in Peripneumonia Nephritis? It is because the vessels are so engorged that they cannot put on Inflammatory action. Is the pulse small in affections of the Stomach & Intestines? It is because the vessels in these parts are small. Interruptions of the Pulse may be accounted for in the same way. The Case of Mr. Mullenburgh, which came under my Care afforded a remarkable proof of this. His disease was Hemiplegia, & his pulse intermitted invariably, after every 6th & 11th pulsation. What is still more remarkable, the Number of Strokes in each Minute was exactly 80. There are however, instances, in which the pulse refuses to sympathize with the general System, & of Course, ceases to afford a true indication of the State of the disease. But this is no Argument against the importance of the pulse. There are instances, in which

the Needle ceases to afford sure guidance to the Manipos, — yet this has not banished the use of the Compas. 2^o The Pulse becomes doubtful, as a criterion for what I shall call Superficial Excitement. This is removed by Bleeding; by which the Blood vessels are enabled to play (if I may be allowed the Expression) to the time of Inflammation. 3^o From a disordered state of the Pulse of the Radial artery. 4^o From Idiosyncrasy. 5^o From too much fat. 6^o From accidental muscular pressure. 7^o From Exposure to Cold, which is a Sedative, & diminishes the action of the arterial System. 8^o From a want of irritability. 9^o From disorder in the heart, and lastly, from an unequal excitement, as in Palp. &c. The Pulse is sometimes more quick & more frequent than at others. You observe that I draw a line of distinction between a quick and a frequent Pulse. By frequency, I mean the greater or less ~~pulsation~~ number of Pulsations in a given time. By quickness, the greater or less time in which the pulsation is performed. A Pulse may be frequent, & not quick, & quick without being frequent. It varies greatly in point of frequency. I have known it rise as high as 170, and even 220, and descend so low as 40, 30, 20, 9, & even 4. in a minute. The Pulse is often Intermitting. It is so

in Malignant fever, and in old age. A perfect
-ly regular pulse in old age, is a sign of
disease. It is also various in force & regularity. -

Now, Gentlemen, proceed to speak of those
Morbid States of the pulse which occur in fever.

First of the Depressed Pulse. It is some-
times softer naturally frequent, and at other times
softer naturally Slow, & sometimes, even impercept-
ible at the wrist. Again, it is natural as to fre-
quency, yet depressed. It is either partial or general.
It occurs in plague, yellow fever, Malignant
Small pox, & pleurisy. It is occasioned by the
force of stimuli; prostrating the Blood vessels
below the point of reaction. On bleeding the
Oppression is removed, & the pulse rises. It may be
compared to a willow which bends beneath the
blast, but when that force is removed, it springs
back, & recovers its erectness unhurt. How shall
we distinguish the depressed from the weak pulse?
I answer. 1st from its occurring in the beginning of
disease; or in the paroxysms of such diseases as
are periodical. 2nd By its impating when long
felt a sensation of tightness to the finger. 3rd
By occurring in affections of the Heart, Brain,
Stomach & Liver. 4th By occurring sometimes
after Bleeding. This happens from the action

having been let loose all at once, & producing a dispersion. 5th By its being often proternaturally slow, or intermitting.

2nd By The Sulkey Pulse, small, tense, and quick; but not frequent. It imparts a sensation like that of a piece of Cat gut; hence it is also called the Cat gut, and the Corded pulse, I have called it the Sulkey Pulse, it conveys an Idea of resentment. It occurs in malignant fever.

3rd By The Synochous Pulse. This is the reverse of the two former. It is full, frequent, & quick; but has no tension. It occurs in Bilious Yellow fever, also in Congestions of the Brain.

4th Synocha pulse. full, quick, frequent and tense. It occurs in inflammatory fever. Pleurisy & Pneumonia.

5th Synochula pulse. small, frequent, quick & tense. It imparts a sensation like that of a small quill. It is a contracted Synocha, & occurs in Chronic Rheumatism & Gout.

6th Synochoid pulse. It is a compound of Synocha, & Synchus. It is partly tense & partly soft, like a quill that has been trodden upon.

7th By The Typhoid pulse. This is full, round, & tense — a grade below Synochoid. It occurs in

in the beginning of the jail, Hospital, or
Ship fever.

8th The Typhus pulse. This is a weak & small
pulse, which occurs in the latter stage of some
fevers, & sometimes in the beginning of malig-
nant fever. In speaking of the Depressed
pulse I compared it to a Willow, bending be-
fore the wind; but rising when that was over.
The Typhus is the reverse of this. It may be com-
pared to a shattered & broken down Tree, which
is only to be raised by the hand of Art.

9th Hectic pulse. This is very rarely Synochia
or Synochus — frequently Synochoid, often
Typhoid. It occurs in Phtisy Pulmonalis, Chro-
nic Gout, & Ulcers.

10th The Hobbling pulse. This is unequal and
fluctuating. It may be divided into three species
1st When one, two, or three small strokes gradu-
ally succeed a full one. 2nd When it passes
from great force, to great weakness, & vice
versa. 3rd When it passes from frequency to
Slowness, and from Slowness to frequency.

11th The Double pulse. when at short intervals,
two distinct pulsations are perceived, one always
weaker than the other. when the first pul-
sation is strongest it is called Dichroism, when

when the last pulsation is strongest, it is called Capitans. These are seldom met with & are not important.

12th by The Serrated Pulse, conveying the sensation of one part being elevated above another, like the teeth of a Saw.

13th by Vermicular Pulse. It is a small frequent pulse, resembling the successive motions, or windings of a worm. Hence the term Vermicular.

14th Creeping pulse. Is small, weak & scarcely perceptible, it occurs in the last stage of Disease

15th & lastly. — The Natural pulse. There is an apparently Natural pulse, occurring sometimes in the highest grades of Disease, when it ceases to be an index. This is always very dangerous.

I have thus, Gentlemen, enumerated the different pulses that generally occur in fevers. — But you are not to expect that these will be found uniform. They are most frequently combined. First. You will find a two fold combination. It is at the same time quick & frequent, depressed & weak, slow & intermitting. Next, You will find a three fold combination, full, strong, & quick, at the same time. 3rd It will be four fold — full, strong, quick, frequent, at the same time.

The pulse often varies when there is no
Fibrile Action in the System. 1st It is full and
bounding — Next, It is weak and slow, and
it is distinguished from a depraved pulse, by
occurring in a weak state of the Body; and
in Convalescence when Debility alone attends. I
shall hereafter prove that Debility is not dis-
ease.

There is an anæsthetic pulse, which im-
parts a sense of fainting to the fingers. The
pulse might be divided into ten Grades, five
above & five below, par. 0. might be considered
as the healthy Standard &c.

Having treated of the variations of the pulse
at large. I shall proceed to Give you a few di-
rections, Gentlemen, for feeling it. Never take
hold of the patients wrist immediately after en-
tering the Sick Room. Neither speak to him,
for conversation accelerates the pulse. But
first sit down, pull off your Gloves, and warm
your hands if it be winter. Apply four fin-
gers to the pulse at once. You will thus have
a more perfect sensation, than by using
one singly. When much Nicety is required
in the Case, suspend sensation in the eyes,
by Shutting them; & in the ears by ordering the

Silence in the Room. Thus you will concentrate all feeling; or as Dr. Darwin would call it, all "Sensorial power" in the ends of your fingers. When the pulse cannot be felt at the wrist, the Temporal artery should be resorted to. The pulse should not only be felt in order to judge of the propriety of Blood letting; but always before the following Remedies are prescribed, viz. Opium, as well to judge of the propriety of its use, or to regulate its dose. I have known five drops of Laudanum to produce the same effect, that would require 25 in a different state of the system. Vomits, Purges, the Hot & Cold bath - the Pediluvian - Bath, Chalybeats - and Stimulating drinks. — It is the practice in Europe, to make use of a Stop watch to determine the frequency of the pulse; But I hope it will never be in the United States; because it withdraws the attention from other parts of the pulse. I would recommend the quarter of a minute pulse glass in preference to a Stop watch, for they are seldom good.

You need not be averse to admitting every thing I have said on this Subject, for there is no Theory, or Speculation whatever.

It has been said that a knowledge of the pulse is of difficult attainment, and that it requires as much a sense of touch, as of the Ear for a taste for Music. Mr. John Hunter was of this opinion, and assigns as his reason for this belief, that his brother, William Hunter never could acquire a knowledge of the pulse. I am of an different opinion, & think that it may be acquired by any young man of common understanding, and that in the time employed in the common course of study.

I shall conclude this Lecture on the pulse with this observation. It is said of Plato that he inscribed over the door of his Academy "Let no man enter here who does not understand Geometry." Was I to erect a Temple to Medicine, I would not have inscribed only on the front door but on every of the Apartments, "Let no man enter these walls, who has not a perfect knowledge of the pulse.

December 20th 1804. Having hitherto
treated of the Proximate cause of Disease, to-
gether with its Seats & Signs. I now proceed to speak of
the Remote, Predisposing, & Exciting Causes.

The moment the Child receives its Breath, it
also receives the principle of Death, as Pope bea-
tifully expresses it.

"As man, perhaps, the moment of his Breath
"Receives the lurking principle of death,
"The young Disease, which must subdue at length,
"Grows with its Growth, & strengthens with its Strengths.

I have said before, that Children are predisposed
naturally to disease, sometimes from injuries during
Parturition; from the baneful practice of washing
them immediately after delivery; from premature
application to Study; from amusements, such as
jumping, Standing on their Head &c. &c. Most
of our diseases are derived from the Insensible qua-
lities of the Atmosphere; such as Miasma, Human
Effluvia, the Harmatia winds, a certain unknown
Matter in the Air; the Smoke of certain Substan-
ces when burnt; the Smoke of certain Manufac-
tories. &c. They are also derived, from the Sensible
qualities of the Air, - these are Heat & Cold, rarity
& density, Dampness &c.

Heat & Cold are relative terms, & extremes
of both are injurious. Heat exceeding the degree

of Healthy Excitement, produces Debility from action; which first shews itself in the Arterial System. Heat is an universal Stimulant, according to Dr. Caldwell, the temperature of 80° of Fahrenheit disposes to Yellow Fever, more than any other. When combined with the rays of light, it produces Insolation. Eleven Thousand people were destroyed at Pekin, by the disease of Insolation. Heat acts also on the Nervous System; hence the frequency of Syncope in warm climates. It produces excitability of the Muscular fibres; produces Languor & debility of the Lymphatic System, incaps Absorption. Heat induces Blindness; acts on the Mental faculties, producing Weakness of Memory. It acts on the alimentary Canal, producing ep-
cph, & then aspect of appetite. It excites perspiration, then dries up on the Skin; production of Cutaneous diseases. It gives the fluids in fevers a Centrifugal direction, hence Buboes in Yellow fever, &c. It discharges the white Colour from the Skin, hence the dark Colour of the Skin of Blacks mostly. But diet, disease & states of Society influence the Colour. Heat disposes to Cholera & Dysentery, & increases the Secretion & excretion of Bile.

Hence Complaints arise from a redundancy of bile in Warm Seasons. Heat invigorates the Venereal Appetite. It has been justly observed that there are a greater number of Births in the Winter than in the Summer or any other Season. Heat acts upon the Eyes producing Ophthalmia, Gutta Serena, Cataract &c. It promotes the discharge of the Menses. Hence females menstruate earlier in Warm, than in Cold, Countries. Heat lessens the density of the Solids. By inducing Languor, it disposes to the use of Opium, Tobacco, &c, & lastly, by the great depression it produces, it is sometimes fatal. Heat is less friendly to old than to young people.

I now proceed to speak of the relative effects of heat — when preceded by cold, it produces Depression. After the evaporation of the Succo Humidi, which passes over immense beds of Sand, & became heated, the temperature fell from 112° to 80° A moderate warm day in March will produce depression; the Excitability being accumulated by the previous Colds. The sudden Abstraction of heat may produce fever by destroying the Equilibrium of the System. Heat when applied, produces insensibility to cold. From

the increased excitement from heat which, after the long application of cold, reduces the excitability, and increases excitement. Our hottest Summers are the most healthy; but the following or succeeding Autumns the most unhealthy. The one season generates the disease, & the other produces it. The body suffers more in passing from heat to cold, than from cold to heat.

Dry Summers are production of inflammatory diseases; but wet seasons produce malignant diseases. Weather, uniformly moist, dry or hot, is not unfriendly to health. Moisture in the atmosphere is absolutely necessary to respiration. In a dry atmosphere, Cholera, Diarrhoea &c, are induced & yield to blood letting.

I now proceed to speak of the effects of cold. Cold is universally a sedative. It produces debility from abstraction. Cold is a Negative quality. When excessive heat produces depression, as other stimuli do, the application of cold will restore the body to its natural healthy state of excitement. Slowness of pulse in Plenitude is owing to depression of the system. This state of

Depression is relieved by Bleeding which
unlocks, as it were, the excitement, & health
is restored. When the System is naturally
depressed, it would be improper to bleed,
because the System will not rise. In pain
produced by Cold, the System reacts, & a temporary
Pneumatism is produced. The Stimu-
lus of Aliment counteracts the effects of
Cold: Cold promotes & increases appetite. The
Farmers of this State are well acquainted with
this Circumstance. They keep their Horses in
warm Stables, otherwise, they would require
double the quantity of food. Cold weakens
the Venereal appetite, & increases the Secretion
of Urine. It weakens the faculties of the
Mind. The first impressions of Cold on the Skin
produces paleness; this is succeeded by a redness,
which is owing to the impetus of the blood
distending the relaxed vessels. This circum-
stance was supposed to be owing to the Stimu-
lating quality of Cold. To the redness, suc-
ceeds a purple colour, which is owing to an
Stagnation of blood in the vessels, & finally
Mortification takes place. Cold causes a
Bleeding from old sores. It affects the
Nerves with Coldness & torpor. It produces

debility in the Muscles. As Moral evil
is the effect of Moral good, so is cold the
effect of the abstraction of heat. It in-
creases excitability, and debilitates the fac-
ulties of the Mind. It lessens the force of
the Body. Cold however, paradoxical it may
appear, always produces precisely ~~pro~~ ^{pro}portion to ~~fever~~
Dr. Mosley informs us, "that if the heat of
the Air in the Island of Jamaica ever
sinks to seventy two, the most Inflamma-
tory Diseases follow after the application
of heat." Cold is always increased, when apply'd
suddenly, in its Morbid effects. Cold water
when poured under the Sleeve of a Coat pro-
duces such exquisite pain, that it has
in some places, been used as a punishment
for vice. I knew a young Woman who
could at any time, by laying ~~off~~ a Ribband
off her Cap, could excite, or produce a
Coriza. The reason why Holland is so unheati-
thy is, that the Air is so very moist & cold. Per-
haps there is more destruction from cold,
than any other operation. The Brute Crea-
ture groan under it, and I believe that

does not exist upon the face of the Globe a greater enemy to man than Cold. Dr. Sydenham says most of the acute diseases produced in great Britain is owing to ~~the application~~ an exposure to Cold.

December 22nd 1807. When Cold suddenly succeeds the short application of Heat, it is more apt to produce disease, than when gradually applied. It invigorates the System after the heat of a sunnern day, by abstracting heat. Some have supposed that Cold is a Stimulant, because it produces redness of the face &c. of persons who are exposed to it. But this is caused by the reaction of the System. Cold can only act as a Stimulus by obstructing perspiration, whereby the Capillary vessels become disturbed, which may form a Stimulus. When it produces pain, it acts by abstracting heat, the parts thereby collapse, and press upon the Nerves. As cold abstracts excitement so it increases (as I said yesterday) extensibility, or what Darwin would call Sensorial Power. Cold relieves the System from the effects of excessive heat, but it is not on that account a Stimulant. Emetics & Cathartics, as well as bloodletting increase the strength, not by

their tonic power, but by their abstracting
the excess of Stimulus, which produces de-
pression. Every winter we are robbed of our
insensibility to heat, & the action of the Miasma,
which we had acquired during the summer.
Cold succeeding to a long application of heat
produces Cholera. When it follows its shoot
application, Inflammatory Fever is the Con-
sequence. Health & Longevity are more fre-
quent in Cold, than in warm Climates. The
Inhabitants of Cold countries defend themselves from
the intensity of the cold by thick walls to their
houses; double glafs to their windowz, confining
between them Atmosphric Air; and wearing fur
dressz. By these precautions the winter is ren-
dered agreeable and disease prevented. The body
should always be accommodated to the changes of
the weather — It is from their attention to this
that the Chinese enjoy generally good Health.

Transitions from Heat to Cold, & from Cold to
Heat, do not necessarily produce disease. It may
be prevented by proper Care. It requires greater
care to obviate disease in the middle Lat-
itudes, than in the extremes. Cold produces palp-
& Aporphy. A current of Air produces this mu-
tuous &c. — The abstraction of Stimulus from
one ~~part~~ part, increases excitement in another.

More diseases are produced by cold than by any other cause. beauty, as I have before said, groans in concert with man under its effects upon sensation, health, & life. By the avenues of the feet & mouth, we receive nine tenths of our diseases.

Sick people have a warning of the changes of the weather, & suffer more from them than those in Health. Cold acts upon us more in the sleeping, than in the waking state. Hence the foundation of almost all of our diseases are laid during sleep. Old people suffer more from them than those who are young, and drunkards more than sober people. They are always chilly, when not under the influence of ardent spirits. Children bear cold better than adults. I heard of a woman who was found frozen to death, while her Infant was found alive by her side. Heat & cold act differently at different times. Spring is said to be Youth, Summer, manhood, and Autumn old age. The sickly season generally commences about the middle of August. This is partly owing to the dry, and partly owing to morbid exhalations. ——————

There are a greater number of deaths in the winter, than in the summer season or any other season.

To Determine the Predisposing Cause of Disease? Hence we find old people, and Drunkards more liable to be acted on by exciting causes. — June is the Healthiest month in the year. Diseases of the winter spread themselves in the month of June. Hippocrates has long ago said "that diseases of the winter, are not cured until Mid summer". Most of our May diseases bear Bleeding. The stools of patients in winter, till February are black. — this proves that they are under the influence of Autumnal disease until that month. Cold is often taken during a Grenade; hence in Spain, it is Gallant to make love in a Course boied. Rain checks Bilious fever by destroying & preventing Mortid exhalations. — Winds have a great effect upon the Mind. The South Wind, from its depressing effect, is called plumbis austre. Wind from the Sea produces peevishness; hence the Sea - foot of Northumberland — Storms affect Health very much, & the absence of wind produce disease. Baron Hombott informed ^{me} that the Natives on the Head waters of the Oro-noke have no word to express wind. The difficulty of respiration on High Mountain is ascribed to deficit of Oxygen:

changes affect us more than the extremes of either heat or cold; hence a sudden diminution of the weight of the atmosphere, is very apt to affect us, as pneumonies, angina, catarrh &c. are produced by the sensible qualities of the air — Hepatitis is rarely the effect of its sensible qualities. Winds which come from the Atlantic predispose to consumption. I now proceed to speak of various Impregnations of the Atmosphere. or

The Insensible Qualities of the Air.

December 23rd 1807. — — — The Sensible qualities of the Air are remote causes of Disease.

Their action is different according as their action is positive or relative, & according as their application is long, or short. Of the insensible qualities or impregnations of the atmosphere, there are two kinds. called by Doctor Miller of New York, Koino-Miasmata or Marsh exhalations & Idio-Miasmata, or Human effluvia. Exhalations seldom take place at a Temperature below 80° Fahrenheit. They do not arise from marshy ground, when completely covered with water. — Once in the Month of April, all that marshy land between the Delaware & Schuylkill (just below Philadelphia) was overflowed with water. For a long time after disease was looked for in vain. But the Heat

was insufficient to raise exhalations. Some years after, a similar event occurred, & I ventured to predict that no disease would be produced, the event verified my prediction. Great falls of rain, or no rain at all, are not accompanied with sickness. a Summer perfectly wet, or perfectly dry is generally healthy. Moderate quantities of rain, and a moderate degree of heat produce Bilious Fevers. The same cause will produce different forms in different nations. a Dysentary will reign on the Summit of a Hill, while Intermittents, Pemphigus reign on its declivity. The greater degree of Cold on the Summit, as it were, driving the disease inwards, hence its name Filrix Introversa.

Miasma often Cooperate with the Unsickly quality of the Air. In the Night, under cold & damp Air, exercise is more fatiguing than at any other time. Miasma from Vegetable origin, arise from cabbage, Potatoes, Mint, Coffee, Chocolate shells, Flop, Hump, Thaw, old Books confined in Closets, green wood confined in Cellars, Weds cut down & suffered to putrefy near houses &c &c. Putrid animal matter is less productive of Disease, than Ve-

- gitable. On what part of the Body do they not? I answer, on the Stomach & Bowels, producing Intra-vertebral fevers, as Colic, Dysentery, Diarrhoea &c. They also act on the Liver, protracting the action, thereby preventing the Secretion of Bile; or imparting to it great acrimony.

Supplicated Excretions in the Liver, occur in Dysentery. Hence, in the Consequences of the Disease, there is also a discharge of blood & mucus. Unlack the Excretion by Blood-letting: — the Bile will be secreted, & the stools become Natural. Miasmata also act on the Veins, as on the Brain, Kidneys & Spleen, producing engorgements in those Veins. They frequently act on the Spleen with more force than any other Veins. They act on the Nervous System, producing Chapting, Hypochondriasis &c. on the Muscles, producing Convulsions. on the Lymphatic System, producing glandular Swellings. on the Skin, producing Carbuncles, Pitichiae &c. These eruptions prevent fever. They are extra-vertebral fevers. The Plague is prevented by Cutaneous eruptions. When Bile is obstructed, Yellowness of the Skinner uses by the Absence of its excretion, or in other words, by Absorption. Miasmata act on the Eyes, producing ophthalmia in sickly Autumn. The same Miasma — to produces different Diseases. It is impossible

to tell by the Endometria the impregnations
of the Air, we will now enter into the consider-
ation of

Idio Miasmatic Exhalations - or Human
Effluvia. However mortifying it may be to
it is no less a fact that our bodies generate Disease.
Idio Miasma are derived from Faith, Hospitals,
Schools, Low, Rapid, Vegetable Diet, Depression
of Mind, the Crowding of Strangers together, want
of Cleanliness, & a Scanty Supply of good Aliment.
Famine & Pestilence often tread in the footsteps
of war. Idio Miasma is often derived from vit-
iated respirable Matter, by Magnation. They ad-
here to Cloathing. Once knew a Stocking given
a Typhus to a Servant, several days after it had
been pulled off by his Master, who had been af-
flicted by that disease. Typhus Miteas, or low
Nervous fever is produced by this Cause. In
this the pulse is weak, & seldom requires Blood
- letting. — Idio as well as Scrofulo Miasma
produce Bubos, Catarrah & Inflammation. They sometimes
produce Dysentary & Scurvy. There are two Species
of Contagion; the one from secreted Matter; the
other from excreted Matter. Could universal
Cleanliness be introduced, we should be free from
all disease, depending upon uncleanliness. Hollan-

once the Hot-bed of Disease, is now a healthy Country. The United States, by neglecting to drain low grounds, will for years to come continue to generate Bilious Diseases.

December 24th 1807. — After our last Lecture Gentlemen, we spoke of Idio-Miasmata. They are produced by all excretions, which after their discharge become putrid. Of all excretions the perspirable Matter is the most apt to produce Disease. These Miasmata act more frequently in the winter. They adhere to Woolen & Cotton Clotheing. For this reason they should be frequently changed and well dried. Miasmata also adhere to Stone & Brick walls. They are said to induce Typhus fever only; but they often induce Disease attended by Symptoms of Inflammatory Action. In Soldiers the Typhus Mition is produced, while the same cause produce Inflammatory Fever, in the Officers. In Typhus, glandular parts are affected as in plague. There is a great difference between Disease produced by Idio- & Chronic - Miasmata. In the first place, Diseases, produced by Idio - Miasmata occur in winter. The term of their duration is 20, or even 30 days; lastly, they terminate by perspiration.

Miasmata may last a long time in the

the System without producing any effect.

They have been conveyed by the winds to the distance of 9 Miles. ~~Heavy~~ Rains destroy, while light rains, increase putrid Exhalations. High winds raise them when they lurk at the bottom of Stagnant Pools. — The assistance of all is not ~~to~~ been called in question. We might as well say the Rose has no Odour, because it has never been discovered by experiments made on the Air.

The time of War is fruitful in the production of Disease. The reason is that several Soldiers sleep in the same tents. The French Army — March without tents & sleep in the open Air. In this case, the fresh Air carries off the Malaria matter as soon as it is generated, & they are in general healthy.

Miasmata, as I said before, adhere to the walls of houses; hence the necessity of placing the beds of the Sick in the middle of the Room. Persons sometimes infest themselves again, they may be so vitiated by the insiprible Matter, as to infect others, & remain ~~to~~ well themselves. It has been generally remark that women in a state of pregnancy commonly escape the influence of Miasmata, because they are under a continual Stimulus; viz. the Stimulus of Distention.

The Idio-Miasmatic exhalations principally affect those persons, who are predisposed by Chronic Debility. They produce disease of feeble Morbid action. M. Boucet mentions a species of air which proved fatal to Beavers. It killed his Grey-hounds & Mules. It probably was, Mephitic gas, which continued near the surface of the Earth, and therefore did not affect men.

A third source of Disease is Atopic Gas. The air of close rooms, where there is company becomes Atopic. Epilepsy generally attacks where there is company, hence its name "Morbis Comitatus". Carbonic acid gas, which arises from the combustion of Charcoal often produces disease & sometimes death. It acts chiefly on the lungs producing Cough. Manufacturing which emit fumes impregnated with Lead, Arsenic &c. also induce disease. But these are not all. There are short of wind, called the Jamoon Wind, called also the Harmattan Wind, which often proves fatal. This wind passes over innumerable of Bitumen, impregnated with Sulphuric acid. The Vapour discharged from the Earth by Earthquakes produce disease.

I formerly supposed the Inflammatory state of the air was owing to its being super-oxygenated; but modern Chemists have taught us that the

Air always consists of the same proportion of ingredients. This however dis prove the existance of these morbid impregnations. all animals bear testimony to this! — We cannot abstract this matter from Air, but we can prevent its noxious effects, by avoiding all exciting causes; for remote causes seldom produce disease without the aid of exciting causes — We now proceed to speak of

Situations.

A Country is always more or less healthy, as it is more or less cultivated. A new Country is always healthy. When the Forests are cut down, if a wet soil is exposed to the action of the Sun, the theatre of Fever is opened. Intermittents & remittents are strangers in Connecticut. The reason is that there is such an equal distribution of property, in consequence of which, the whole Country is highly cultivated; all their low, marshy grounds are drained. This should be done in every Country, in order to promote its health. Vapid drinks, & vegetal diet dispose people who live in the Country to Dysentery, more than those who live in Cities. A Dysentary prevailed in New College, while I was a Student there. It was remarkable that none of the Students from Philadelphia had the Disease. all those who had wire from distant parts of the Country, & who had been accustomed to vegetable diets.

Mountaneous Situations are most healthy, and those Mountains on which grow large quantities of ever greens are more healthy than otherz. There are however, some exceptions to this rule. The British Soldiers quartered on the hills about Calcutta, are more sickly than those quartered in the plains. How is this to be accounted for? Do the hills arrest & retain these Morbid Exhalations?

Mill ponds are fruitfull sources of Intermittents. It is a curious and important fact, that Trees growing around these ponds effectually prevent the effect of the Exhalations. The air on the Sea Shore is more healthy than at a little distance from it, either on land or water. The reason probably is that the collision of land & sea air produces a compound, with which we are totally unacquainted. People who live in Cellars are more liable to Consumption & Rheumatizms. Green wood in houses often produce disease. It contains a Saccarine, & fermentable matter. The old Romans were well acquainted with this circumstance & they never intable a house untill a year after it was Built.

Clos Cellars are unhealthy. This may be partly prevented by having Chimneys in them, which promote a free circulation of air. The smaller the Roomz are in a House, the Cooler it is in Summer & the Warmer in Winter. Cleanliness promotes health. Dean Swift was once invited to dine with his friend Mr Pilkington. Upon entering the House, instead of sitting down as he was invited (it is customary) he

first went over every part of the house, from the
Garnet to cellar. On his return to the parlour,
he said "Madam, you are a good house-wife. I
give you no credit for the cleanliness of your
parlour; for you expected company; But I find
every part of your house equally clean".

December 26. 1807. — We will now say a few words
about the influence of Change of Situation.

Those who come from a sickly country to
city, are liable to be taken with a fever, which
probably, they would have otherwise escaped. This
will happen, and the people of the city, may at the
same time, be healthy. They are apt to ascribe it
to the air of the city; But the new impressions, to which
they are exposed, are the cause. The natives of un-
healthy countries escape disease, while new settlers
become diseased. Even plants, when removed from
the vicinity of Marsh Effluvia, languish & die;
because the stimulus by habit becomes necessary to
their existence. — Have Thunder & lightning any
influence on the human body, independent of the
changes they produce in the temperature of the
atmosphere? I answer they have. Thunder produces
Sickn^{ess}, Cold Sweats, & fainting. I have known
Epilepsy produced by Thunder. It is particularly
injurious to some constitutions. I know some persons
who have a kind of Thunder Phobia. (if you will

allow the word). I shall now speak of the
Influence of the Heavenly Bodies

Astrologists have existed from the earliest ages of the World, who have pretended to predict future events by the appearance of the Heavenly bodies. The Sun, Moon, & the planet which we inhabit, have all a very evident influence; but we cannot ascertain that ~~of~~ of the other Planets. I have before spoken of the influence of the Sun, also its heat. In health the power of the Moon is impalpable; but in disease, it is easy to be perceived. I now have a Gouty patient, who never has a Paroxysm, but after the full Moon. Its action on the Nervous system is evident. It produces Mania, which soon recurred only once a month, is called Lunacy. Death most frequently occurs in the night. This is owing to the absence of light. Epilepsy & asthma are under its influence. Worms are more troublesome at the full of the Moon, than at any other time. Oysters become fat at the full of the Moon: who then, can doubt of its influence on Man? The Moon influences parturition; hence it was formerly invoked during labour (The Goddess Lucina presiding over Parturient Women) Chronic diseases are more under its influence than acute: hence we ought to advise our patients afflicted with Chronic diseases to return to rest early in the Evening.

Eclipses of the Sun have also an extensive power at the time of the Eclipse of the 15th June 1806; all the Lunatics in our Hospital were perfectly silent. Not a word was spoken by them. The fowls returned to roost, & the Cattle to their Shelters. The Thermometer fell suddenly 4° & the Mercury in the Barometer rose inches in the rule. Even a Cloud passing over & obstructing the rays of the Sun effects a Change in the Temperature. These changes may & often do, induce Disease.

The Human body is also affected by ^{the} diurnal Revolution of the Earth. The Evening, from its effect on the Body, has been elegantly described as the Autumn of life; hence also, our chronic patients should be always advised to retire to rest early. They should avoid evening exercise, evening parties, and study at night. In treating of the influence of the heavenly bodies, you observe that I have given you facts only. Time will probably enable us to form a Theory of its effects.

Of Contagion

The Number of Contagious Diseases is very much curtailed. They are divided into those which originate from secreted Matter, & those which originate from excreted Matter. Small pox originates from Contagion. But there are some facts which would induce us to believe that even Small pox sometimes depends upon a malignant Constitution of the Air. I have heard of Cases of this kind of Disease in Persons who had never been exposed to its Contagion. Hence, it may be called, in some instances, an Atmospheric Disease, as well as some otherz. Some diseasez are propagated by Contact, as itch, ring-worms, Lues venerea &c. Otherz through the medium of Air. These are communicated by a volatile Matter, & occur without an exciting Cause. This Contagious Matter differs from Marsh-pestilential because it is not arrested in its progress by Cold & Rain. We have said that it is taken into the Body by the lungs, Saliva &c. It never acts exclusively on the Skin, when applied. This fact militates against the doctrine of Cuticular absorption. I shall proceed to speak of Diseasez, as they appear in the form of Epidencies.

Epidemic come on like a disciplined Army: they are not however irresistible. They may be prevented, modified, nay, vanquished by the power of Medicine.

Contagious diseases may be compared to Scouting parties. The influence of excreted Contagious does not extend to more than ten feet. These diseases are called Epidemics. The Epidemics, I include those groups of Disease produced by Koino Miasmata; as Intermittents, Remittents, the Eastern or American Pestilence &c. — Mania is sometimes Epidemic.

§. Laws of Epidemics

1st They are more or less affected in their violence by the sensible qualities of the Atmosphere. Cold & Rain checks them; Moisture spreads them. They are less inflammatory in Worm than in Cold Weather. There are however some exceptions to this rule. 2nd They are affected in their determinations to different parts of the Body by diet, drinks &c. — 3rd No two diseases of equal force, & which originate from different causes, can exist in the blood vessels at the same time. A Horse cannot Trot & Gallop at the same time. The symptoms of Disease are sometimes blended. There sometimes seems to be a kind of Monarchy among Diseases. The Plague Yellow fever &c, have always exacted homage from Contemporaneous diseases of less violence. If they do not entirely banish them, they force them to do homage by wearing their Liver.

The Yellow Fever has imposed black stools on
small pox. a fracture of the leg has acted as the ex-
citing cause of yellow fever: It called forth the
inert Miasma into action. an Epidemic impo-
sing its influence on Chronic diseases. They carry
with them for months the fragments of its Liver.

Epidemics not only demand homage from all
contemporary diseases; but they sometimes chase them
from their presence. In the year 1764, the plague
in London banished all other diseases, & would have
no assistance in the dreadful work of destruction.
4th. Epidemics of Superior force sometimes
yield to those of inferior force. How can this be
accounted for? I answer, that the violence of Epi-
demics is different in their commencement, pro-
gress, and decline. It is a wonder then, that Small
Pox in its beginning should drive away plague in
its declining state. 5th. Epidemics appear in
a great variety of forms, of different force, and
dissimilar symptoms.

December 2^d. 1807. At our last Lecture, Gentleman,
we considered the laws of Epidemics, which
consideration we will proceed with.

6th. The same Epidemic is attended with dif-
ferent degrees of force in different years, and
in different parts of the same year. It is mild
in its commencement, presently grows violent.

and in the Conclusion becomes mild again.
4th It is different in different parts of the same country; and of course, requires different remedies. In some bleeding is always fatal. — in others, all who are not bled die. In some, purging & sudorifics are fatal; in others, all who are not purged & sweated die. 8th Epidemics, produced by the same cause, appear in different parts of the body, as the Head, Stomach, Bowels &c. But the disease is at last an unit. It appears in different parts of the body according to the difference of tempaments. — 9th Epidemics often afflict persons of one Country only. 10th They often afflict persons of a race only. By our knowledge of this Law, we are enabled to account for the great Mortality which swept off the first born in Egypt. 11th Epidemics sometimes afflict persons of one Colour only. 12th They sometimes attack persons of one Sex only. 13th Again, they afflict persons of one rank in life only. 14th They attack only certain Communities. 15th They afflict the members of one family only. 16th They afflict persons of one profession only. 17th They afflict the Human Species only. 18th They sometimes afflict persons of all Countries, Colours, Ages, Habits; Professions & Conditions.

For the most part Epidemic diseases affect the Human Species only; but they sometimes attack Brutes, Fish, insects &c. — Mosquitoes never fail to accompany Bilious Feverz.

House flies always retreat during the prevalence of the Yellow Fever. Epidemics are always preceded by, accompanied with, or followed by weather that is either hot or cold, wet or dry. — These are either premonitory signs of Epidemics; or the flight of Birds, Death of Cats &c. They assume various forms, as Plague, Scartatica, Leprosy &c. &c. We do not know what it is that affects the Air so as to favour its Malignant Constitution which produces Epidemics. It may be the Electric fluid. But how will you say that its extent is partial or limited; so are Hail, & rain storms &c. why not the Electric fluid?

The Pulse is quickened during the prevalence of an Epidemic. Diseases of much action are removed by Yellow fever; & healthy people have continual Head aches & languor. Women are more apt to Miscarry during Epidemics, owing to the action of Morbid exhalations.

Epidemics are supposed to be sent from Heaven, as judgments for the wickedness of man. They are also supposed to depend upon the planetary influence. By some, they are supposed to have been brought from the Eastern world; particularly from Egypt & Siam. Some say, they are imported in Ships, Balloons, Sailors, Clothes &c. I have heard of fifty Yellow fevers imported in Sailors jackets. But all those notions are erroneous. Sydenham alone has given us a Co-

— not knowledge of Epidemics. — Cullen, Darwin & Brown say nothing about them. I shall direct the force of Epidemic Diseases against Mosology, and endeavour to choose it at least from the United States.

Of Aliments

These are injurious, by their quantity & quality. Ex-
-cess in quantity produces Apoplexy. Sometimes it lays the foun-
-dation of the vicious practice of drinking Ardent Spirit,
& Chewing Tobacco. Disease is produced by too small
a quantity of Aliment. The quantity must be regulated
by the Age & occupation. A Labourer, according to some,
requires 8 lbs. a day; But 6 lbs. are sufficient. The use
of Aliment is to support Animal life by its Stimulus
sc. — We can eat much more Vegetable than
Animal food. The foundation of disease is often
laid at Boarding Schools where there is a scanty
allowance of wholesome food. Famine accumu-
lates excitability; Causes fever, fated Breath &c. A
small degree of hunger increases Strength apparently.
How is this accounted for? Answer, by the Stimulus
of (want of food) disuse of eating, & close of life
acting on the accumulated excitability. It is on this
principle that people are more devout during a
Fast.

December 29th 1807. We proceed, Gentlemen
with the consideration of Aliments, and shall

now speak of their influence on producing Disease.

1st of Fish in a diet consisting entirely of this Article produces a change in the Colour of the Skin. It produces an unpleasant taste & unwholesome quality in the Milk of Woman who live upon it. a diet of Fish Meat produces Scurvy. There is a great difference between the meat of Wild & Domestic Animals. Indians who feed on the meat of Wild Animals, are not so strong as white Men; but they can run faster longer; this last arises from Habit. — The revival of Religion, & the Restoration of Liberty have great influence on Agriculture, & Horticulture, & these influence Health. — — —

A Vegetable diet disposes to Dysentery & other diseases of the Bowels. It diminishes the Venereal Appetite & lessens the Viso. It is from this Cause, that the Chinese are of slender Habits. They are of a sickly appearance, & want that blush of Health, which distinguishes those who live on animal Diet. Amongst these the general effects of diet. — We next proceed to its particular effects on the System.

Many Vegetables seem to produce a specific operation on the Human Body. Beans excite flatulence — Oats produce Cutaneous eruptions — liver the Scotch, who live for the most part on this Article are particularly subject to diseases of the Skin. Chase, when taken alone produces Heart-burn; in conjunction with any other Aliments, constipation &c, the different species of grain require a bad quality from exposure to a moist atmosphere.

Wheat is liable to many Diseases which dwell
themselves in the Human body. Dr. Huxham's treatise
on the effects of air, I would advise you to read
for information on this subject. The different
modes of preparing food has an influence on its
wholesomeness. It is wholesome when long prepared
before eaten. Fish kept several days are apt to
produce disordered stomach & Bowels. Eggs when
boiled soft are of easy digestion; when hard, the re-
verse, & are apt to produce Asphyxia. Toasted cheese
is apt to produce Asphyxia. Fainted fish is apt to pro-
duce Diarrhoea. Oysters when cooked too much are
injurious, producing Colic, Asphyxia &c &c. proving
fatal to numbers. Bread when half baked has
produced many diseases. In one instance I knew
it to produce Asphyxia. Long intervals between meals
produce disease. The body then vibrates between two
extremes. — Repletion and debility. Large quantities
of food taken after long fasting, will produce disease.
Valentines marines often suffer from this, especially
when travelling between stages, they become hungry,
& over eat themselves.

A diet of Vegetables may be rendered more
healthy by refraining from labour. A change
from Vegetable, to an Animal diet is hurtful.
Patients recovering from Chronic diseases should
eat five or six meals a day. Mr. Bruce fainted
at the smell of Animal food, after living on
a Vegetable diet for some time.

I have known a few spoons full of broth bring on intoxication after living for some time on vegetable diet. Convalescents from Small Pot should return gradually to animal diet. A mixture of several sorts of food is hurtful, particularly to Convalescents; hence we should always advise our Convalescents to dine on one dish only. Food taken too hot or too cold, is apt to produce disease. Mr. Reed, a Member of Congress, died in consequence of eating an Ice Cream. New dishes are apt to disagree with us. — Thus Cucumbers, Radishes, and Melons, the first time we eat them, are apt to disorder the Stomach & Bowels. It seems as if the Stomach had forgotten its acquaintances; but recognises them after two or three Meals. Elements often produce disease from remaining too long in the Stomach in an undigested state, hence, when we are called to patients, the necessity of making enquiry concerning their pre-vious diet for weeks & even months before.

Haller mentions a Case where food lay seven months in the Stomach. Not, forty days, so of a Fish 4 months — a single Cherry two years, a Grapes 7 months!!! Food is often unwholesome from being cooked in improper vessels. Lead or Copper vessels, are the most unfriendly to health.

When a whole family is sick, the presumption is that it is owing to something in the Aliment unfriendly to health, or to the Vessel in which it was cooked. When I was at Jersey College, Sixty Students were taken in one night with a diarrhoea from dining on a pie made of Pigeons which had fed on Poko Berries — Fresh Meat is the most wholesome in the Winter, SalTED, in the Summer. Honey sometimes produces dangerous effects. These effects are to be accounted for by Idiosyncrasy. — We are next to speak of

Condiments

These are Salt, Vinegar, Pepper, Mustard, Alspice &c. &c. That Salt which is least apt to deliquesce in the Air, is the best, and least apt to produce disease. The Indians never eat Salt, hence they are more commonly afflicted with Diarrhoea, Vinegar destroys the irritability of the Stomach, produces dyspepsia &c. It was once supposed to be a Specific for reducing Corpulence. A Lady in this City being rather Corpulent, took to the use of Vinegar. It brought on Dyspepsia, Gastritis &c and finally terminated her existence. — There is nothing that patients deceive themselves in more than in the quantity & quality of their food.

Frederick IInd of Prussia was a great Glutton; his Physician calling to see him, in a declining State from Dyspepsy, about eleven O'clock in the evening found him eating a large Pye, & when reproved for it, he declared he only eat enough to keep Soul & Body together! It was his custom to dine on a large bowl of Toddy about an hour before dinner, & at bed time, his Cal Pye. A Grocer in this City was affected with Obstinate Dyspepsia by tasting frequently through the day Samples of Sugar & Molasses, which was cured by directing its disease.

There are two articles which come in for a place between diet & drinks. (i.e.) Tea & Coffee. The use of Tea disposes to goat. Women are more subject to this Disease than Men; because they drink more Tea. It often appears in the form of Dyspepsia. Coffee, when strong produces vertigo, and a long train of disagreeable Symptoms.

Drinks.

There are Water, Wine, Beer, & Ardent Spirits. — Water produces disease in three ways. 1st By its sensible qualities. 2nd By being mixed with foreign matters, & 3rd By being taken in too great quantities.

First. Cold Water produces this agreeable consequence under certain circumstances. Its first effect is on the Teeth: hence more Teeth are drawn in Summer than in Winter. The sudden & violent Spasms it produces in the Stomach Causes Syncope, & Death. This effect may be prevented by previously washing the hands & face in Cold Water, & thus gradually abstracting Excitement. Indians avoid Cold Water. That water is most wholesome which has been Standing in Warm Air, or exposed to the Sun for half an hour, & in this State it always quenches Thirst sooner. The reason the Indians drink so little, is that they avoid Cold water, & habit at last enables them to do with but little. It has been found that the Contents of provinces over Sixty feet through the Earth. Water flowing in these beds of limestone becomes Balthatic. Drinking too large quantities of it, is very hurtful. Taking draughts of it in the Morning is injurious. This practice originated in ignorance & is kept up by Ignorance.

December 30th 1809. — We must proceed with the consideration of Drunks. — Wine — This is composed of must & ancient Spirit. Gout is the effect of the use of this Liquor. Its first effect is to accelerate the pulse. In Turkey, where the use of this Liquor is prohibited by the Law.

the Gout is unknown. Wine should not be used until it grows old. These excepts the same difference between old & new wine, as between ripe & unripe fruit.

Beer, when largely used, produces Gout. I know several instances of this. Cyder also produces this disease. The first fit of Gout that Mr. — ever had, came on after taking a large drinck of Cyder. A hot iron plunged into it obvates its injurious effects by destroying its acid properties. or quality.

Ardent Spirits. — For particular information on this Subject, I refer you to my Inquiries. Had I an hundred tongues, I could not sufficiently describe their evil effects on the human Constitution. I have frequently said that I hoped my pupils would be distinguished by their knowledge of the pulse — I now say, I hope they will be distinguished by their detestation of the use of Ardent Spirits. If ever you see a son of Occulapins with rosy cheeks, lifting with a trembling hand, the intoxicating draught discard him. If he says that he attended Lectures, proclaim to the world, that he is either an Imposter or an apostate. Not a Student of Mine; but a follower of Browne.

Dress — we will consider this under three heads. 1st Quantity — 2nd Fashion — 3rd Quality. It has been said that pride is never too hot nor too cold. This is strikingly verified in the fashions of the Day. In a climate like ours, where there are such sudden changes, season should not regulate the Dress; it should always be regulated by the Weather. Tight dress of all kinds should be avoided. Head-ach is often produced by tight Night Caps — Tight garters produce big Knees, an arsaceous Swelling, & a disposition to Stumble. Three fourths of our Men are brought on by wearing Summer Clothes too late in Autumn. Woolen Clothes are best. Whole Regiments have been saved by wearing flannel Shirts. I believe flannel would be the best to wear always. Few diseases are the consequence of too many Clothes; but many arise from too few Clothes. Our Ladies wear sometimes only one Petticoat, & sometimes — None at all!! — They go Naked and are not ashamed. Eve was not ashamed because she was innocent. Our Ladies are not ashamed to go Naked; but I fear, it is not because they are innocent.

Flannel clothing may be worn next to

the Skin for three Months together, without
producing vermin, or disease. Next to flan
nel Cotton is to be worn. Thuts dshirts ought
to be made of Cotton — powder was introduced
into Poland to Conceal Plain Poloness ^{Pica Polonica}. Large
parties in the Neck Clothe to hide Seropulpa
in the present royal family of Great Britain;
& Boots to Conceal Crooked Legs, from Rickets,
in the Reign of Charles I. — — —

Poisons

Poison is a relative Term. There is no poi-
son, but which in certain degrees, & by certain Ani-
mals, may be taken without injury. Their action
is different, as they are applied to different parts.

When applied to the Skin they are innocent; when
to the Blood they are instantly Fatal. all remote
causz are an Unit. They are all Stimulants & their
operation is precisely similar. Poisons are Animal
Vegetable, Mineral, or Aerial. Animal Poisons are
the bites of certain reptiles. Vegetable Poisons are
Henbane, Night Shade, Laurel, Stramonium,
Monkz- Head, Cicuta &c — The common Buck
wheat proves poisonous when eaten as salad, in
its tender green state. The Mineral Poisons
Mineral Poisons, are Arsenic, Lead, Copper &c
The Aerial Poisons are certain gasses of the

carbonic acid gas, Hydrogen gas (this is a Mix-
ture in the Doct. Hydrogen gas is not a poison,
though it is not proper for Respiration, the object
of respiration not being confined to the reception
& emission of a fluid merely. However, I should
not have Anima doted on this, had he not
been a Professor of Chemistry in this Uni-
versity, for to pretend to disent on all his errors
would require the Patience of Job; it would
be a task equal to that of Hercules when Vandy
endeavoured to perform the twelve Command-
ments in Subjection to Eurystheus.) The same
windy &c. — How do they act? Some say that they
act on the muscular fibre, others on the vital
principle. Their action is Specific. On the Musc'ly
they produce palsy, Tetany &c. Some act pri-
marily on the Blood. You can suppose the
venom of the Riper to act in this way. Some
act on the Skin, as the poison vine; & others act
on all the System at once, as the Miasmata.
Some act Specifically on the lungs, as certain
Orial poisons. How do they produce Death³ By
stimulating so powerfully, as to occasion an
inability to perform the motions of life. The
different parts becoming incapable of trans-
mitting impressions.

Worms

Worms are found in various parts of the Body. In the Liver & Urinary Bladder they exist without producing disease for a long time. They are also found in the Throat & Maxillary Sinus. In the ears and nose; but more frequently in the Bowels than in any other part. They are of different kinds, as Lumbrici, Ascarides, Taenia & Oeserbitina. They are sometimes generated before Birth. They are said to consume the Superficial Aliment in Children. A worm in the Stomach is an Ervor Loci. They seldom affect the Arterial System. We seldom see an idiopathic worm. However, in Autumn they produce more diseases than at any other time. I think they exist necessarily for certain wise purposes.

December 31st 1809. Disease occurs from a want of worms, particularly of the Lumbrici. They only produce disease by being in too great number, and by Ervor Loci. We should always have an eye to the worms in Chronic diseases. Disease & Death have been the consequence of swallowing Cherry Stones, pieces of Copper, Iron, &c. Some Substances produce disease by being taken into the Lungs, as Water Melon seed, Crumbs of Bread &c. & if not soon discharged by Coughing they produce death. Pins are sometimes taken in at the Stomach & discharged at different

parts of the Body. I knew a Lady who laboured under a Chronic disease for a long time, & who recovered upon the discharge of a purgative from the Vagina. Specula received into the Stomach will occasion Ulcers, which will not heal until they are extracted. Small Splinters, being under the Nails, cause Locked jaws. — One evacuation from the Bowels every day is necessary to health but some have gone days, & even weeks without one.

I knew a Captain who sailed from this port (Phila ^a) to Lisbon, & returned without an evacuation from his Bowels by Stool! Costiveness occasions Headache by the disturbed Intestines compressing the Descending Aorta. Piles by compressing the Hemorrhoidal Veins? and Suppression of Urine, by pressing on the Kidneys, and thereby preventing the Excretion, or by compressing the Neck of the Bladder & preventing the excretion of Urine. — Suppression of Urine arising from this Cause may be relieved by a purge.

Many diseases are ascribed to obstructed perspiration & some with truth. Catarrh, Diarrhea &c. are frequently caused by it. When perspiration is obstructed the discharge from Tongue is increased. Obstruction of Bile causes Costiveness, white Stools &c. Gastric is the consequence of a regurgitation of Bile. Emaciation, Schistous Liver, & Dropsy arising

from the same cause. Are there any diseases, which arise from a Retention of Semen? No; unless it is accompanied with the Venereal Disease, then it causes Melancholy, Mania &c. — Suppression of the Menses causes some diseases.

Too much exercise or Motion brings on debility, from ~~obstruction~~ Action, and too much rest debility from Abstraction. It is impossible to enjoy good health without labour of some kind. We much suffer less from sedentary occupations than men. The old Romans were acquainted with this fact? — Hence all their Sayfors were women. Rest disposes to Obesity. Some say that six or eight hours sleep are necessary to health; but many enjoy good health on much less. — Card players will sit up three, four & five nights together; but in such cases, some Stimulus is necessary. In these cases, Avarice is the Stimulus; & life may be supported on it a long time without sleep. I have heard of six weeks.

Undue Exercise of the Faculties of the Mind. — The Understanding & Passions either increase or diminish action; the influence of the Understanding is great; the undue exercise of it weakens the Brain, inducing Fatuity.

It weakens the Stomach and Bowels, inducing Dyspepsia & Chronic Constipation. It weakens the Senses especially Seeing & Hearing. It is aided in its pre-

- judicial effects by a solitary life. Midnight
studying are hurtful. The night air is unwholesome
Disproportion between the age of the Student & the
Nature of his Study causes disease - the night
as well pretend to qualify a person for eating
Beef, by chewing pebbles, as to put a Child into
Grammar to qualify him for speaking a language.
~~Sudden Transition~~ It is doing violence to the Mind
& thereby to the body. Sudden transition from Idleness
to Study are hurtful. Does want of ~~any~~ activity
of the Understanding have any bad effect? Yes:
Habitual Mental Idleness produces Idiotism.
The less cultivated the Mind the more violent
the Passions. — Dr. Franklin used to say there
were three ways to pass time. 1st To Spend Time,
that is, to employ it in some useful occupation. 2nd
To Mis-spend time; that is, to employ it to no useful
purpose; & 3rd To let time Spend itself, i.e. to let
it pass away without doing any thing at all. The
Memory is often weakened in those Studies in which,
it is not aided by the Senses.

Morbid influence of the Passions

Passions may be called Acute & Chronic; or
Emotions & Passions. Joy & Terror are examples of
the first; Love & Hatred of the latter. The Stimu-
lating Passions act positively; the Sedative

Passions have a negative operation. They resemble heat & cold. The latter is nothing but the abstraction of the former. Grief & despair are Sedative passions. Revenge & Stimulant. The effect of Grief is different as it is accompanied with Hope or fear. When unsuccessfull it produces Melancholy, Mania &c. When a Lady rejects a Suitor, she should always do it in such a manner as to preclude all Hope. - Joy is a powerful Stimulus & often produces Syncope & Death. The doorkeeper of Congress fell dead upon hearing the news of the capture of Cornwallis. Great & unexpected good news produces Syncope & Death. When Syncope is not produced, depression of spirits is the consequence. I have heard of a young man who hung himself soon after falling heir to a great estate; & I knew another, who shot himself soon after taking possession of a charming wife!!!

Anger produces a stimulation of blood to the brain, bleeding at the nose, an increase ^{to} secretion of bile, foaming at the mouth, Hysteria, Abortions, Mania, and Death. Grief produces Syncope, Asphyxia &c. when long protracted, it impairs the memory. It is remarkable that tears accompany only slight grief. When excessive it is attended with stupor. There seems to be a sleeping point, & above or below it, tears ⁱⁿ ^{long} ^{we-} ^{dis} not flow.

Tears moderate & express grief. Grief reduces the System to the sleeping point. It is common to see a person sleep soundly the night after some calamity has befallen him. It changes the countenance, depresses the Lips, wrinkles the forehead, & gives the Face a putrid natural appearance of old age. The Arteries of the Heart & even the ventricles have been ruptured by Grief. The Morbid effects of Fear are, quick respiration, a copious discharge of pale urine, Jaundice, Aphonia, asphyxia, Bloody Sweats, Mania, & Death. Protagon of all these effects are recorded, & I have myself witnessed many of them. It acts on the Hair of the Head, causing it to rise purple suddenly upwards. Shakespeare mentions this in a beautiful manner in Hamlet.

"I could a tale unfold; whose lightest word
"Would harrow up the Soul; freeze the Blood;
"Make thy two eyes like Stars, start from
"their Spheres;
"Thy knotty & combined locks to part,
"Each particular Hair to stand on end,
"Like quills upon the Prickly Porcupine."

It destroys the Memory & Understanding, annihilates the desire of life. The Chinese when closely pursued by the victorious Tartars, threw themselves into a River to avoid being put to Death by the sword.

Fear when combined with other passions produces of
different effects. It increases the Excitability; & the Love of Glory acting on this accumulated Excitability produces exploits in War. There exists what may be called the Joy of fear. When a person sees himself rescued from danger which threatened him with the loss of Life, he feels the Joy of Fear.

Envy acts like a perpetual blister, or an abscess, according as it is kept at a greater or less distance from its object. Ambition is an Inflammatory fever in the mind. Avarice has induced Maria, & even Death. — The following inscription was composed by a wag upon an Arch Bishop of Canterbury, noted for Avarice.

"Here lies His Grace, in cold Clay clad
"Who died in want of what he had!"

A perfect knowledge of the Simple or Compound action of the Passions is absolutely necessary to the Physician.

When this propensity is indulged in a lawfull way
it is seldom attended with any bad Consequence.
When old men indulge to excess, it is very hurtfull
Never an old man should never marry a young
woman — When his wife is as old as himself he
is not so likely to indulge his venereal appetite.
It is remarkable that the decay of venereal estate
— must between 50 & 60 years of age, is almost al-
ways accompanied by an increase of venereal Ex-
citability. Never old men prefer young wives.

January 1st 1808. The Doctor Read, to day, part
of two of the most distressing letters I ever heard, from
persons addicted to Onanism, or self pollution; one of the writers desiring to be castrated; the other
wishing his exit from this world, such being the
state of their minds. Sennertus relates the case of a
young man, who emitted semen at the sight of a
woman. The base practice of Onanism is follow-
ed by nocturnal emission, sometimes Gonorrhoea, dis-
charge of Semen & Blood, pains in the loins &c.

D. Rush recommended the internal use of
Cerop. Acetat, & Salivation. — — — — —

The different States of Society dispose to par-
ticular diseases. The poor people are the most sub-
ject to Syphilis &c. Governments have considerable
influence in the production of Diseases. Slaves
possess animal life in a feeble state. The subjects
of despotic Governments possess more irritability
than sensibility. There is an absence of stimulus
of the love of liberty in them; hence their de-
fected state of mind; hence also; the reason why
negroes are more subject to convulsive diseases.

The Persians are not acquainted with the
disease of Insanity, owing to mortid impurities
being concentrated in their muscular system.

During our Revolutionary war, the Political
Joy of the English acted with more power by

Being preceded by Fear, than it did in this Country. — Lord Chatham died immediately after delivering a Speech to the British Parliament in favour of the American Independence; owing to the Stimulus of Joy, acting with accumulated force upon the Excitability, which had been increased by Fear. Here the Action was sudden.

Errors oppose errors, but Truth agrees with Truth; hence the good health of the republican Party, during the Revolution, & the disease among the Tories, called Tory Rot; this prevailed for the most part, in South Carolina. The Republicans on the contrary, were uncommonly healthy; hence the Republican form of Government contributes to Health.

Religion

I will proceed to consider the healthy influence of Religion. It is as necessary to Health, as Air is to Respiration. Religion cannot fail of influencing the body through the medium of the Mind; & a sense of it excites Joy &c. a physician who renounces Christianity, ought also to renounce his profession; so essential is it to the Profession. — — — I shall now speak of the Diseases of persons of different Occupations. The first occupation of our forefathers, was Agriculture, Farmers, Carpenters &c. who labour in the open Air, are subject to Accidents, fevers &c. but are generally longer lived than any other class of people. The Diseases of day labourers are numerous, dropsy, Meas. &c. &c.

Weavers have pale faces, weak, & are subject to Dyspepsia & Hypochondriasis, from their sedentary employments, & from their being for the most part, employed under ground. Watch & clock makers, Taylors & Shoemakers are subject to diseases from their employments, as Costiveness &c. The Glutei Muscles of Shoe-makers, & Gastrocnemii & Sartorii Muscles of Taylors are most commonly in action, & are larger than those of any other person. Smiths are subject to inflammatory diseases, owing to the Metals which they make use of. Painters are subject to Calculous Complaints, from being most commonly employed in galleries or upper Stories of the House, they retain their urine for a considerable time. Doct. Franklin, when he followed the Business of Printing used to lay the font upon the Stove to warm the Types (in winter) he found his fingers become numb & stiff: he could not account for it, for some time, at last he attributed it to the heat of the Stove, volatilizing the particles of Lead, & when desisted from heating the Types the disease left him. — Lawyers & Physicians are generally long lived because they spend exercise with Study. Physicians who ride much are subject to Costiveness, piles, Fistula in Ano &c. Soldiers & Taylors are most subject to Gout.

Amusements. — Diseases are sometimes —

Caught on by Amusements; hence the fatigue of a dance render the system below the sleeping point, but you will not see a Farmer returning from his harvest field who will not sleep. Diseases sometimes are owing to the Idiota Miasma, arising from squeezing at parties thence the number of batavians about Christmases. The Theatre not only produces the same diseases as parties; but also, Nervous Diseases. Tragedies excite virtuous sympathies; but not virtuous actions. Tragie Scenes produce retrograde action of sympathy in the audience. We see persons apparently in the greatest distress, & sit still without lifting a hand to relieve them; our passions recoil, & nervous Diseases are the consequence. An ignorant Spanish Soldier went to the London Theatre one evening, when the Tragedy of Macbeth was acting, & hearing Macbeth cry out "Is there no help at hand?" instantly drew his sword & leaped upon the Stage, crying out, "Help at hand my Leige"; not being able to restrain his feelings. Hunting has brought on the most formidable diseases of the Inflammatory kind. Morning Drams are used (tho' improperly) in some parts of England on account of the Fog (as they suppose) depriving the system of parts; then drawing they call Antifogmatic. Another cause of disease to ladies, is receiving lying in visits. The ringing of Bells is injurious to hysterical patients. Tobacco in its different forms

is the cause of many diseases.

Hereditary Diseases — Those are Congenital & Hereditary — Congenital are hereditary, Small Pox, Measles, Yellow Fever &c. Consumption is generally derived from the Father, & Mania, ~~Malaria~~ from the Mother. Hereditary diseases are Dropsy Cancer, & Sore legs. I knew a family in Chester County, in whom Sore legs were hereditary, only appearing in the decline of life. Congenital Diseases are acquired in the womb. I have known Children to be affected with family diseases when the parents were entirely free from them. Those that attempt to prove that Consumption is contagious, prove too much; & therefore prove nothing at all. I have known Leprosy disappear every 2^o or 3^o Year & reappear every fourth; hence the propensity of the Physicians enquiring into the Hereditary diseases of a family.

January 2nd 1808. I proceed, Gentleman with the
consideration of the remote, predisposing and
exciting causes of Disease

The injury that has been done to mankind
by false Theories in Medicine, is incalculable. The
Anima Medicæ of Hahn, Morbid Visability of
Boerhaave, the Spasm of Hoffman, the Viz Me-
dicatrix Natura of Cullen, the Debility of
Brown, all have done much Mischief.

Precious of Blood have been Spilt in endeavouring
to correct the Morbid Lector of Boerhaave. Opium
is daily committing Murder in the hands of the disciples
of Cullen & Brown. Influenced by the opinion that the
predisposing cause is the disease itself, they give Opium,
in all states of it without regard to the Pulse.

There is such a thing as truth in Medicine. Every
theory, however erroneous containing some truth. It
Theory alone which collects arranges Facts. an
injudicious confidence in the Salutary Operations of
Nature forming a part of all Physiology. It would be
improper to speak against this to our patients, & even
to some physicians. It is still the Pagoda of Medi-
cine. — I have somewhere seen a dialogue between
a Sword & a Rum Hogshead; each of which claimed
a pre-eminence over the other in destroying the
lives of men. — Could a quack have been

introduced as a third disputer, he would quickly have
convinced them both that they must yield the palm
to him in the work of Death!

In many diseases the first Medicines used, are
taken without advice. They do harm by inducing
Costiveness &c. Purging Salts, often produce Colic and
Diarrhoea. The habitual use of Aloe brings on
Piles. The continued use of the Butter nut, induces
Vertigo, Palsy &c. The French use this article. In
France a Purge & a Clyster embrace the whole of
the Materia Medica. — The habitual use of Butter
does much harm. They destroy the irritability of
the Stomach, and induce dram drinking. The
use of Nitre produces Diarrhoea & Colic. The im-
prudent use of the Cold Bath has induced instant
Death. Pediluvium should always be prohibited
in diseases of high Morbid Action; Patients are
very apt to make use of it without advice. We
should always be careful to forbid it in Cases where
we think it would be improper.

Diet drinks are very common in Spring — abstinence
from Animal Food is better. — Exercise should always
be forbidden in the beginning of Fevers. Quack
Medicines have contributed largely to the work of de-
struction. Godfrey's Cordial has to my knowledge
killed a Child. James's Powder & Surking Tong

= Balsam have also done no little mischief. Some of these Patent Medicines do neither good nor harm; & thereby increase disease. Dr. Priestly had nearly killed himself by taking Fowles's Powder; thereby not fearing the Pleasure to gain considerable ground.

Medicine also does harm in the hands of Physicians. I have known Laudanum to produce violent Colic; & Bleeding to produce debility with serious consequences. Mercury has killed, when given to produce Salivation.

We will next speak of

Sympathy and Antipathy, in producing disease. The Sympathy of mind has long been understood; but that of the body has been but little attended to. Many facts unite to prove that this Sympathy does exist. Yawning will go through a whole company. Boerhaave relates a case of Convulsion by Sympathy. What in the Western States is called the Jerks, or Jinking exercise, was probably first induced by Oratory, or perhaps by Divine Power; but it is evidently propagated by Sympathy. Man is justly styled an imitative animal. His muscles often move without the consent of the Will. I have heard of a Child who took up its food with its mouth instead of its hands; & snapped at flies to drive them away, instead of using its hands. This the Child learned from a Dog with which it was accustomed to play before the Fire. Its parents being

poor, were not able to hire a Nurse; & had not time
to attend to it themselves.

Diseases from Antipathy are Congenital
& Acquired. James II was born with an
Antipathy to a Drawn Sword! Peter the Great of
Russia was born with an Antipathy to Streams of
Water; and the only way he had to cross a River, was taken
to throw himself head long into the Boat. Some few
persons cannot stay in the Room with a Cat. This arises
from Association & from the Inspiration of the
Cat. Innate, or Congenital Antipathy is Acquired
during our residence in Utero.

The Influence of Ideas and Motions in pro-
ducing disease is considerable. They act by Associa-
-on, & independently of Association - The recurrence
of all Periodical Diseases is owing to associated
Motions or Ideas. I have known the paroxysm of an
Interruption kept off several hours by confining the
patients to a dark Chamber.

Effects of Accidents

Many diseases are produced by Falls, Scalds,
Cruises &c. I have known a Hydrocephalus im-
mediately come on a Month after the Contusion of
the Head. a Stroke on the Back has produced an
abscess four Years, after it was given. We should
never consider a Contusion of no Consequence,
but should obviate its effects by Bleeding;

low diet, Hunger, &c. we will now speak of the
Influence of Time.

It is of the utmost importance that we should
always live on good terms with our Stomach, for
sooner or later it will revenge all its injuries. I
have called it the Conscience of the Body. Mi-
gration retarded the progress of time upon age.

It always adds several years to life. Even those
who live in the Eastern, will live longer by
emigrating to the Western States. Not more than
Seven or Eight in One Hundred die without disease.
They are like an old violin, fairly worn out, and
the strings unable to emit sound. —

Infancy is disposed to many diseases, 1st from
the disproportionate size of the head, there is a
great diminution of blood to that part. 2nd
From the cartilaginous state of the Cranium,
& opening of the sutures. 3rd Children have more
irritability than sensibility; hence they are most
liable to convulsive diseases. 4th From the great
irritability of their Stomach & Bowels, they are
disposed to Cholera Infantum &c. Cholera is
nothing but the Bilious fever invited to the
Bowels by their irritability. 5th From the
great activity of passion, & lastly, from
worms. As Infancy changes to childhood the

determination goes off from the head to the throat of
- Cheer; hence Cynanche Trachealis is more fre-
quent in childhood than at any other period.

January 4th 1808. — Of Predispositions
to Diseases at Puberty — at this age there
is a determination of blood to genital organs. We are
now subject to inflammatory Fever, pains in the joints, taken
called growing pains &c. Females are more subject
to diseases ~~of~~ from vitiated appetite than Males. —
Between the 18th and 35th Years there is a disposition to Con-
sumption. Pethora is produced by the quantity of blood
being disproportioned to the size of the body. This peth-
ora is thrown upon the lungs; — hence the disposition ~~to~~
to Consumption. Different diseases are produced, ac-
cording as there is arterial or venous pethora. Fewer
people die between the age of 40 & 57 Years, than during
any other 17 Years of life. In this age, there is an ~~exact~~
equilibrium between excitement & excitability. People
of this age are generally more happy than at any other
time. But it is in this tranquil period that death
from old age begins his operations. The gradual decay
of the Eye sight is the first symptom. When a man
first puts on Spectacles, he puts on part of his Thread! —
After this follows an inability to retain the urine for
any length of time. When a man first rises from
his bed in the night to discharge his urine, he makes
his first step toward the Grave! Between the Years of
80, and 90, the whole excitability of the System seems

to be absorbed by the arteries; hence the slow, but full, round, pulse, at that age. The fluids become acrid by age. The smell of the urine becomes intolerably offensive — The tears possess a peculiar acrimony, & the most trifling sores frequently terminate in Cancer. Age is marked by progressive debility. — It appears in a disposition to be angry. This arises from great nervous sensibility. It appears in the organs of speech, in a tremulous voice — in the muscles, by the shaking of the head — in the brain by Vertigo — in the alimentary canal, by Costiveness — in the nervous and arterial system by Palsy, &c. — — —

Both the Single and Married lives dispose to many Diseases. In those years which Males & Females spend in a state of Celibacy, when they should be in the Married state, they are liable to many diseases. More single men & women die than at early periods, than Married people. A Bachelor's life is a good Breakfast, a tolerable dinner, but a very bad Supper. Men, soon after Marriage, become disposed to disease. Barrenness in women disposes to disease, chiefly by the mortification of feelings which attends it. The desire of Progeny is universal. Judge then what must be the effect of disappointment in this on delicate habits. Pregnant women never die of Consumption. Consumption is suspended by the patient becoming pregnant. Pregnancy disposes to diseases by want of exercise; to Vertigo from Plethora — to Costiveness from pressure on the rectum.

Sucking disposes to Consumption. Suddenly taking a ^{t of}
Child from the Breast, when there is a plentiful ^{vi.} Secretion of Milk is hurtfull. Women, at the period when
the Menses disappear are liable to many diseases. When ^{Da}
they become irregular, they are about ceasing. During ^{te-}
all this Period, Women are subject to diseases from the ^{Sta-}
nows Pethora, as Hemorrhagies &c. Deformity is the ^{ople}
consequence of Disease. Preternatural Height, & un-^{ture}
usual lowness predispose to disease. Obesity disposes to ^{act}
too much rest — hence to disease. A large Head and ^{blea}
short Neck disposes to Aprophy. — a narrow Chest, ^{hain}
to Consumption. Women suffer less from Deformity ^{be}
than men.

Congenital weakness disposes to disease. Seven ^{ve-}
Month Children bring it into the World with them. ^{new} The present King of Great Britain was a Seven ^{ted.}
Month Child. I have now finished the Consideration ^{do}
of the Remote, Predisposing, Exciting & Proximate Causes ^{use-}
of Disease. I have divided the Causes in this Manner ^{use-}
in Compliance to the Custom of Medical Authors; ^{be}
But we might include all except the Proximate, ^{use-}
under one head. viz. Remote Cause. ^{vi-}

There is but one Predisposing, one Remote, one in ⁱⁿ
Exciting, & one Proximate Cause. I again tell ^{long}
you, Gentlemen, there is but one disease, which is ⁱⁿ one
Monbid Excitement. I shall pursue this Mon- ^{use-}
bid Excitement into all its holes, & Scant it out of dis-
from the Human Body.

Almost all impusions which produce disease, appear in the Stomach, Liver, or Bowels. — I now pass on to enquire into the

Causes & Phenomena of Death

The Causes of Death I shall extract from my Lectures on animal Life. The Abstraction of all those Stimuli which support life. Preternatural rigidity. Wounds producing a dissolution of continuity. ossification, Stimuli loosing all their effects by long use. Just before Death there sometimes takes place, a resurrection of dormant knowledge — Elevation of talents, above the ordinary exertions of it, & a discovery to new talents. These are owing to a translation of Morbid Excitement; the excitement (just before Death,) also, frequently Concentrates itself in the Trachea; hence the loud voice which sometimes ^{mucous} Death, even after Aphonia. It is sometimes concentrated in the Bowels; hence the Diarrhoea which precedes death. Sometimes in the Musks; hence Convulsions & stiffness. People just before Death sometimes rise out of the Bed. Again Morbid Excitement is sometimes concentrated in the Nerves, — hence exquisite sensibility. In the Arteries, — hence the active pulse, & sometimes just before death. It is sometimes concentrated in the Lymphatics — hence the absorption of water in drops just before death. In the Skin; hence intense heat and Eruption. In the Penis — hence Priapism.

Moved Expectment passing from one part of the Body to another is generally attended with pain; but this is not always the Case, as I shall say here after, Dr. Priestley & William Hunter, both express'd pleasure, in passing to death, — hence this Translation of excitement sometimes affords pleasure. Yea, it is even stationary at the point of pleasure — hence dying people frequently express their pleasure, by Smiles, & other tokens of Joy. It is also, sometimes, stationary at the point of pain — Again they sometimes feel neither pleasure nor pain. Death from old age is never painful. Respiration in dying persons, frequently becomes altogether involuntary. The excretions also frequently become involuntary. The Pupils of the eye generally, just before death, become very much dilated.

Death is sometimes accompanied with a dread of futurity, & sometimes is accompanied with a good deal of Fortitude. Heat & Colour often fluctuate for some days, but I never saw a Case of Resuscitation.

Much has been said about the Ultima Ratio. But it is evident that it is different ^{at} times. That part, to which experiment retreats, is the last impeded. If the Brain is not injured, the Mind lives longest. People often exercise their thinking faculty until the phenomena of life cease. The Bowels are sometimes the last that die — hence Stools are sometimes discharged after Death.

The excitement sometimes flies from Post to Post, till after making a vigorous resistance, it is obliged at last to yield.

Thus Gentleman, we have finished our Pathology — Our view of the Human Body has been gloomy. We will now pass to a more pleasing prospect, & search into the Measures used to remedy those evils.

Finis Pathologi
" B "

Therapeutics

Tuesday, January 5th 1808.

Gentlemen,

We come now to apply the principles hitherto delivered, to the practice of Medicine. I will not say that my principles are true; but they are necessary in order to lead to truth. There is such a thing as truth in Medicine. It must be approached by a Stair case, and this Stair case is composed of Steps, or Principles.

Medicine has been progressively improving ever since it became a science, because it has received support from other Sciences. It is one of the greatest blessings ever vouchsafed by Heaven to the children of men. I shall not in this part of my Course, pretend to mention the doses of all the Materia Medica: For this I refer you to the Professor of that Science. I shall merely mention the different Classes of Medicines & enquire into their mode of operation.

An enquiry into the Nature comes first in order in our Therapeutics. Physicians have been called the Servants of Nature (but I hope

that now he will deserve that name) and it has been said that it is their duty to watch her operations. Here Dr. Rush read part of his oration to the Philosophical Society.

By Nature, I mean Physical Misery. He from Nature creates a desire for cold Air, cold Water, and deprives us of our Appetite. But her operations are often more proportioned to the cause, & she does much mischief in many cases. She wastes herself in unnecessary force in dropsy. She drives the Melancholy patient into Solitude instead of driving him into Company, & thereby does much harm. It has been said that she warns us of our danger by pain. But there are diseases in which she refuses us this harbinger. In Consumption, she alarms us by very little pain, when the danger is great. Again the pain is sometimes greater than the danger, as in Paroxysmia. Odontalgia &c.

In Hemorrhages Nature produces a disposition to Syncope, & thereby occasions a Coagulation of Blood. In Ulcers she throws out a quantity of matter; But in Aprophy, she destroys the patient, by pouring the blood into the Brain when it might be discharged through the Nose.

I am not the only Person who opposes the healing Powers of Nature. Sydenham long ago said she was not to be trusted to, and Dr. Mosley said he had no opinion of Nature as a Medical despot; or of obliging physicians as her Ministers. In truth there are none who rely on the Salutary effect of Nature. How where is the affinity of Blood letting & the tendencies of Nature? & where the physician who does not bleed every day. In all violent diseases Nature is like a drunken man in a dark Room. He cannot find the door or window. If he happens to come to the door he tumbles against it, breaks it, and his own neck likewise. The ineffectual & the prejudicial efforts of Nature may be observed in the diseases of Domestic Animals. Bilious & other forms of disease which affect the Human System, so as to be easily cured by appropriate remedies, will be almost uniformly fatal to Domestic Animals, in whom they are trusted to the operations of Nature alone. In such cases, we should use her like a noisy Cat, i.e. turn her out & shut the door.

The proper treatment of New Epidemics may be discovered from an observation of their effects upon the Constitutions of those who are attacked but slightly — If an Epidemic attacks a City, we are to observe its effects upon the inhabitants of its Vicinity. If there are effec-

ed with Symptoms of an accumulation of
Bile &c. we should treat the Disease in
the City with Emetics & Purgatives. If an
Epidemic attacks the lower order of Soci-
ety, we should attend to its effects in those
of the higher order, & treat the Epidemic ac-
cordingly. Are there any diseases which it
would be improper to cure by art? I answer
there are. Eruptions on the Head should not be
cured without substituting a Diarrhoea. The bleed-
ing piles in old people should not be removed.—
nor in young people without exciting some vio-
lent discharge. Gout in the limbs should be chush-
ed. Some cases of Rheumatism should not be re-
lieved. Dr. Monro's Daughter was seized with Mania
in Consequence of being cured of Rheumatism,
which, again returning, removed her Mania.
Fitters should be approached with a trembling hand.
The Cough of old people should not be cured.
Chronic Yaws should not be healed. Ascites, when of
long Standing should not be relieved by tapping, the
Stimulus of distension by water seeming to have
become necessary to life. In some Cases the
Pain itself seems to be a necessary Stimulus.
The Disease of cold & warm climates

require different treatment, & a variable Climate different from both. The Season of the Year should always be regarded. The relative force of Diseases should be attended to. Various Circumstances are to be attended to. They influence Disease. Even the Moral & intellectual Faculty should not be neglected by an American physician.

An Englishman will not recover until he is indulged in the food of his Native Country, i.e., Beer & Cheese. A Frenchman will require Soups, Meats. An Irishman, Potatoes, & sometimes a little Whiskey. An individual predisposition should never be neglected. — One Mans food, is poison to another, what would cure one man would kill another.

Idiosyncrasy should be ~~thoroughly~~ enquired into, when you prescribe for a patient, you should enquire whether he has a desire for any particular purge, &c. not so. — In all Chronic Diseases we should enquire into the Diseases of the patients ancestors. The age must be always known. In female patients the Catamenia should be enquired into. In men the state of the Hemorrhoidal vessels, & in Children we must not forget worms. — The effects of the excess of venery in Youth, often appears in extreme old age.

Intemperance in Eating & Drinking, Love, pride, Guilt, vexation, Mortification &c. produce

Mania. we should attack them to the combined power of Reason, Religion & medicine. You must recollect that the removal of the remote Cause does not always remove the disease. Celsus is very wrong when he says "Sublata Causa, tollitur effectus.

Some diseases have been cured by gratifying the longing of our patients. But this is not always safe for if a person labouring under an inflammatory fever was to long for a piece of Beefsteak, it would be dangerous to indulge him. — — —

January 6th 1808. — We resume our preliminary remarks. — There is a far more active principle in the Mind than Hope. It is one of the component parts of the Human Mind. This is Faith. By inspiring this it was that Christ, performed such Miraculous Cures. a prudent Physician cannot fail inspiring it when it can be done consistently with truth. —

Different modes of preparing Medicines cause a difference in their operation; as the different modes of preparing food render it more or less digestible. Opium will often agree with the Stomach when Laudanum will not. — Great advantage will be derived from

diverting our patients from self attention, as it
is termed, i.e. from thinking or talking about
their disease. Mirth is hurtful in an Inflamm-
atory fever, as also, opium & other Stimulating re-
Medies. Much conversation should not be allow-
ed in Acute diseases. In Chronic cases, it would be ser-
viceable. When we cannot cure a disease, it should be
our care to ease pain, & smooth the passage out of life.

Our practice will ever be uncertain, while visitors
friends have so much influence over our patients.
The Physician should have uncontrollable power. Too
many visitors should not be admitted. It always
observed that the majority of his patients that die, fell
victim to their disease on Sunday, or a day or two
after, because on those days they received more vi-
sitors. We should not however, exclude young and
sensible, Clergymen; as I have known many cures
performed by their visits & prayers. I have known
some good done by advising patients to make their Wills.
But a Physician should never advise this, he might
as well sit in judgment on the patient, & pronounce
sentence of death.

Bites are taken in three ways, First, By Stom,
Secondly, By regular Seige, & 3rd By Stoping all the
avenues to it. Diseases are cured in the same
way. I will now say a few words on the
Choice of Medicines. Medicines were

formerly valued in proportion to their price; or by the horror which they excited. Disgusting Meds, such as Human Feces, blood, &c. were once famous Medicines. Three fourths of the Materia Medica are composed of inert articles. a few remedies will be sufficient. The only difficulty consists in attaining a proper knowledge of the time when they should be given. There is as great a difference between the physician who prescribes for the Name of a disease, & one who prescribes for the State of the System as there is between the Chinese Characters and the Roman Alphabet. The Chinese have a specific Character for every word; where as the Romans by varying their alphabet form every word in their Language. Medicines generally act more powerfully when several are combined. Thus Bark & Valerian have cured disease, when combined, after each separately had failed.

Cleanliness & Accuracy should always be observed in mixing Medicines. The Directions should be written in a Plain, Legible hand, and on Clean paper & the Name of the Patients never omitted. If these are observed they will never fail to inspire respect towards the Physician. Bad Spelling will excite the disgust of the Patient, & a want of Confidence in the prescrip-

tion, both of which are unfavourable to Recovery.
Let us next inquire into the effect of

Compound Councils or Consultations.

A Physician should always request a Consultation,
1st In all doubtful Cases. 2nd In all dangerous
Cases. 3rd In all tedious Cases, and 4th In all
desperate Cases. But heterogeneous Consultations, i.e.,
between Physicians of opposite theories, are injurious.
It once converts the Sick Room into a Plough
-ter House. If it was judged incongruous, by the
Jewish law, to yoke an Ox & an Ass together in the
same Plough, how much more so is it to call in
two Physicians whose Theories are more different
from each other, than an Ox is from an Ass?

Here the Dr^r introduced a history of the abuse, which had been so
liberally heaped upon him by Physicians of this city (Philadelphia & others)
(I suppose he meant Peter Porcupine of infamous memory) in the Year 1793
& seq. on account of his treatment, & those Physicians who did the Dr. so much
injury by telling the world that he was a Madman, & a Murderer sought
to be hanged by the laws of his Country &c.

With these preliminary remarks, I proceed to speak
of the different Classes of Medicines: but will first beg leave
to recapitulate all those morbid States of the System in
which they are employed. 1st Pneumonial, or elevated
excitements. 2nd Debility, 3rd Depression, 4th Disease,
5th Oppression; hence the System is reduced below the
reacting point, 6th Prostration. In this State the Exci-
-tability is in parts, suspended; & 7th Disorder. This may
occur with or without disease. It will also take place

between the effects of impressions. — Each of them States I have divided into several grades. — — — —
1st Postnatural or Elevated Expectancy precedes Disease. It is accompanied with postnatural appetite, great cheerfulness &c. — The French call it "en bon point" — but improperly; for there is a great tendency to disease. 2nd Debility. The remedies here are Pest, — Gentle Stimulants &c. — we must be careful to distinguish between the species, or grades of Debility, for Aspafato stimulates the Nerves, without affecting the other parts. — On the other hand Dr. Lucchini stimulates the Muscular System without having any perceptible operation on the Nerves. 3rd Inadequation gentle evacuations or Stimulants must be employed according to the grade. 4th Disease. — Here the remedies are either Sedatives or Stimulants — i. e. Medicines which either abate excitement or increase it. They diffuse & equalise it. & where excitement is local, they render it Universal.

January. 7th 1808. — Recapitulation. — The first effect of impressions is to Elevate Expectancy. If these impressions are continued, debility is the consequence. Disorder may be produced at several points. — If the application of these impressions is still continued, debility is succeeded by disease. But Debility may exist without disease or disease or Disorder. The System may be predisposed to both, & yet neither be

diseased nor disordered. When we are called to a patient, who has been exposed to exciting causes, we shall find ~~him~~ in a state of Protr natural Ex-
citement: we should prescribe Abstinence, Rest, Gentle
Evacuations &c. By this means, disease may be often
prevented. But, if he is in a low degree of Debility,
our remedies should be of the Stimulants Clas. If he
is in a state of Depression, two classes of Remedy-
es should be employed according to the degree ^{of} of it. In depression with little or no Disease, Stimulants are
proper. If on the contrary, Disease is locked or Suffocated, ^{the} of
the remedies are those which distract. Two classes of Remedy-
es are employed in the Cure of Disease, viz. Sedatives ^{sub}
Stimulants. Sedatives act either Directly or Indi-^{to}
rectly. The direct Sedatives are Blood letting, Cold ^{with}
Air, Cold water &c. The indirect Sedatives are those ^{up}
which produce this effects by first Stimulating. These ^D
are Emetics, Cathartics, Diaphoretics &c. Stimulants are
seldom given till the System is prepared for them by Sed-
atives. Fear reduces the excitement by abstracting the
feeling of Hope, & Courage.

Abstinence

Abstinence lessens the fulness of the Blood vessels, ^I
& lessens the Secretions. In violent Diseases its action
is too slow to be of much service; but in chronic
diseases attended with Ptyaloma it is very useful.
Salted meat is the first grade of reduced diet. It is ^{more}
less Stimulating than fresh meat. Animals which

take no good for several days before they are killed are liable to putrefaction. — Darkness is a Sedative. It acts by abstracting the Stimulus of light. Silence is also a Sedative, abstracting the Stimulus of sound. Hence its utility in disease of the Brain. Excitement should be abstracted gradually. Nature revolts at sudden abstraction. "Natura nihil fit per saltum" i.e. Nature does nothing by a hop & a jump!

1st. I believe in Specific Stimuli; Gentlemen, 2nd I believe that Medicines act on some parts of the body through the means of others. By the Stomach we convey healthy actions to every part of the body. 3rd. I believe that some Medicines enter the circulation. 4th. I believe that Medicines act on the Sensibility & Irritability. Camphor acts on the Sensibility, & Digitalis on the Irritability. 5th Medicines sometimes act on one System more than others. Other Medicines act upon several Systems, & some act on all of them. Some persons have undertaken to say, that I proposed to divide the articles of the Materia Medica into Classes according as they act upon different Systems. But I never proposed this division. I defy any person to prove it by any part of my Lectures, or any of my Publications.

Cathartics. — These I shall divide into three Classes. 1st Lenient, as Castor oil &c. 2nd Active

such as Jalap & Calomel. 3rd Drastic, or such as Aloe, & Gamboge. These last are only to be used in particular Cases. They are indicated, first, when the bowels are over distended with Feces. 2nd In almost all diseases of the Head, Boast, Wind-pipe &c. 3rd In all Cases where the bowels are unable to perform their functions. 4th In all diseases of the same kind in Conti-
guous Viscera. 5th In too much excitement of the capillary vessels. In this Case, they reduce the power to the Salivating point. 6th In pregnancy & parturi-
tion. 7th In Dropsy. — here the Linient, or Drastic
Purgs are to be given according to Circumstances. 8th In Obstruction of the Hemorrhoidal Vessels.
Dr. Hamiltou has lately recommended purges in Ty-
phus. But there are some Cases of Typhus, in which
purgs would be very improper & even dangerous. I
have known a spontaneous stool to produce Sud-
den Death in a low Typhus. — The following Rulez
should be observed. 1st Cathartics always operate in
large doses when the patient has been previously purg-
ed with the same article. 2nd They may act as
alteratives. — When this effect is produced, the Diar-
rhoea should be kept up a long time. Sponta-
neous diarrhoea has cured Mania. We should
take this hint, & try the effect of an artificial
Diarrhoea in this disease. 3rd When it is ne-
cessary

- capacity to use cathartics for a considerable length of time they should be changed. 4th Drinckz given to assist cathartics, weaken their operation by dilution. 5th Lenient purges induce sweat sooner than drastic. Cathartics are forbidden 1st in all diseases of weak morbid action, as in Typhus 2nd. In Hemorrhage from the Bowelz. Patients in this should not rise from the bed. They are forbidden in the first stage of Colica Retonum.

Emetics, may be divided into three classes. viz.
1st Such as act promptly, among these may be reckoned tickling the Tongue with a feather. I have often excited vomiting in this way after emetics had failed, and thereby have saved several Lives. 2nd Lenient Emetics, those which act pretty certainly, but slowly. & 3rd Active Emetics, as Antimon. Tartari. 1st They are indicated in cases where opium has been taken to produce death. 2nd In a languid condition of the Stomach, to prepare it for the exhibition of Tonics. 3rd In diseases of the head of moderate violence. 4th to discharge Mucus or bile from the Stomach. 5th In Tumors in parts remote from the Stomach. John Hunter says that Emetics are very serviceable in disengaging Buboes. 6th In recent dropsical effusions. 7th. In oppression of the Lungs, Cynanche Trachealis, Catarach &c. 8th. In a dryness & torpor of the Skin, they reduce

its pores to the Sweating points. They are more safely & effectually given to children, than to adults. In Children there is no risk of Hemorrhages or Ruptures. The following Rules and Cautions are necessary to be observed.
1st They should be given in divided doses. 2nd No drink should be given when a speedy Action is required. 3rd The Patient should resume a recumbent position during their operation. Paroxysms will thereby be prevented. Emetics are ~~contra~~ - indicated in highly Inflammatory fever. — In advanced pregnancy. — In persons subject to Hemorrhages & Ruptures — In congestion of the Brain in the Chronic State of Fever. — Where they operate too freely a little Laudanum will check them.

Diaphoretics consist of those which act directly on the Skin, as Pediculicium, Cold Air & Water, applied to the Body, when the System is in a high State of Excitement; thereby diminishing the Action of the Capillary vessels. These I shall call external Diaphoretics. And of those which act on the Skin through the Medium of the Stomach; Internal Diaphoretics. Their action in this way may be explained upon the principle of continued sympathy. — Are the capillaries ever affected beyond the Sweating points? Yes: and Sweating is to be produced by abstraction. Diaphoretics are either direct or inverse. Diaphoretics are indicated in Cases where any Matter is floating in the blood as Miasmata. The Indians expell Poisons from the Blood by Diaphoretics.

I have heard of a young man who had Lues Vena
ria several times and was always cured by a spontaneous
Diaphoresis. They are proper in Cases of Gout,
Pneumonia, in which blood letting is improper. These
are Contrafugal Diseases. — In all Diseases of the Bow-
els, as Dysentery, Diarrhoea &c. — In all Diseases in
which there appears a disposition to Diaphoresis. In
great heat of the Surface of the Body, & when the Body
is dry. In this Case, Cool air, Water &c. will readily
excite Diaphoresis by decreasing the action. — In the
exhibition of these Remedies the following rules should
be attended to. — 1st To promote perspiration the patient
should always be in bed. 2nd Attention should be paid
to the heat of the body. No good Diaphoresis can be
produced when the temperature of the System is above
108°. Cold water will abstract great heat. —
3rd The temperature of the drinking should be regu-
lated by that of the Body. If the body is cool the
drinking should be warm & vice versa. — 4th Sweating
should be occasionally suspended, to avoid exhausting
the patient. Depletion in this way requires as much
Caution, as that by bleeding. 5th The Sheets of the
Bed should be often changed. 6th Diluting liquors
are not always proper to be given during the opera-
tion of Diaphoretics. 7th Sweat should not be
checked too suddenly, nor by cold air.
Diaphoretics are Contra indicated, 1st In very

low States of fever. I have known priests to carry off patients in low Typhus. 2nd. In all cases where they produce no good effects.

January 8th 1808. — Diuretics. 1st External Diuretics, as I shall call them are cold air, cold water, Fear, Abstinence, the noise of falling water. The sound of the Bag pipe has been known to produce diuresis. We should avail ourselves of these facts. — Ominous applied to the Region of the Pubis, are diuretic. — 2nd. The Internal Diuretics are diluting drinks, as parsley water, Melon seed, wild Carrot seed &c. — 3rd. Salt of Tartar, Cream of Tartar, the Vegetable acids &c. are Stimulant Diuretics. They are indicated in dropsical effusions with high Morbid action. Fear & abstinence have performed wonders by their Diuretic powers — In fever they are sometimes useful.

Sialagoges may be called evacuating stimulants. They may be divided into two classes. 1st Those which produce a discharge from the Salivary Glands. 2nd Those which act upon the body. — They act by depuration & rebulsion. They have been stigmatised as unnatural & loathsome Medicines. But Salivation is not an unnatural disease. Aphæ in Children is an effort of Nature to produce Salivation. It is a bleeding attempt of Nature to cure, though she sometimes kills by it. Spontaneous Salivation has cured Dysentery & Gout. a Love Mouth marks the Crisis of all autumnal fevers. A Spitting accompanying Maria.

This is so invariable a symptom, that Maniacs were formerly called Sputatores. It is truly surprising that we should have overlooked those facts so long, & have hesitated to produce an artificial Salivation. —

The following act as auxiliaries to Salivation Medicines. 1st. Blood letting, by lessening Morbid excitement, which prevents Mercury from having its effect. 2nd. Low diet. This acts in this instance, as in preparing the body for the Small pox. 3rd. Emetics These awake the Insibility & Inuitability of the Stomach & Stimulates the Absorents into action (Absorption does not take place at all). 4th. Cold Bath greatly accelerates Salivation. In 1793. I found Cold water & Ice applied to the Head, very useful in favouring the action of Mercury. These act by lessening high Morbid action. Dr. Brown Strong goes farther than I do, & applies Water to the whole body. 5th. Opium accelerating by inducing Catarrh. 6th. Nitre Seems to prepare the Stomach for the action of Mercury. The Antimonial powder Salivates spuriously, on account of the Nitre it contains. To de-ranged pusous, Mercury should be given on bread & butter. When the Throat is swelled it is as mortally as effectual as if the Salivary Glands were affected. Mercury is also used externally in the form of Plasters, friction &c. Here it acts by sympathy. To remove a profuse Salivation the Remedy

are Bloodletting. Rubbing the Throat externally with Sweet Oil, Blisters, opium &c.

Salivation is indicated in all cases which refuse to yield to diaphoretic or stimulant remedies. 1st In disease of the Lungs. 3rd of the Liver. 4th joints. 5th obstructive Diarrhoea. 6th In external tumours. 7th Venereal Obstructions. 8th Convulsive diseases or Tetany &c. But in this we have to lament that the action of the Sialogogues is so slow that the disease comes to a crisis before they begin to act. In children under six years of age, Salivation is apt to produce Gangrene; also in helpless people above 60 years. — In both cases, it should only be aduced as a derivative re-source. M. Boissie says that Salivation cannot be excited in Hepatitis after Suppuration has taken place. This is probably the cause of the failure of Mercury in Salivating in Phthisis Pulmonalis.

Sialogogues are contra indicated in all cases of high inflammatory action.

Erthines. — These are such Medicines as produce a discharge from the Nose. They are of two kinds. 1st Those which discharge mucous from the Nose by Sneezing, & those which discharge it without Sneezing. They are contra indicated in cases of fullness of the Blood vessels of the Brain.

Expectorants — are first. Demulcents, as Liquorice, Flax Seed Tea, Barley Water, &c.

Plan 1. 2nd Emetics or Nauseating Medicines, as Squill, & Pe-
-cachuanha &c. 3rd Stimulating Vapours - these should
be used when the Lungs are Languid. Way & Landau-
nure thrown on Coals and the fumes inhaled. Take
Boar of each half a pint in a quart of Boiling
water, & the Steam received into the Lungs through in-
verted funnel, for an excellent Expectorant. 4th
Blister, these act by reversion. - They are
indicated in Catarrah, Consumption, Pneumoniae.

Emenagoues. - Madder has been much talked
of as an Emenagogue. Obstructions are either acute
or Chronic, the must judge of the Remedy by the
pulse, which always sympathises with the State
of the System in Coataceous Obstructions, Matri-
mony is an excellent Remedy.

Epispathies are of two Classes; 1st Those which
act slowly as Cantharides &c. 2nd Those which act
suddenly as Boiling Water. Take a Tea Cup with
a mouth, wide as the size of the Blister you wish to
make, fill the Cup with a Cloth dipped in Boiling
Water, apply it inverted to the Part, & keep it closely
applied for about ten Minutes, & a fine Blister will
be raised. This mode of Blistering is useful in
many Cases. Epispathies are indicated in diseases of
moderate action. 2nd In local congestions, when
sudden & dangerous, the second class is proper.
They may be often applied on the first or second day
of Pleurisy. Blister to the Head never draw in app

than 24 hrs. Blisters only terminate in Gangrene when applied to the Extremities. Blisters are contra indicated in Irritable Habits — In previous Subject to Thaumaturgy. — & they should be used with Caution in Pregnancy. — — — — — ^{24 hrs. from a blister}

Blisters are calculated to expel the fluids of the Body by discharging pus. Perpetual Blisters are preferable to Letours. I have cured a Seropustulous Tumor, by a perpetual blister about the size of a Dollar. They are used in Local Congestions, Eruptions, &c. They are to be healed with great Caution. — I have hitherto spoken of the remedies of Disease in its open or sensible forms. In Suffocated Disease nearly similar Medicines are required. Nearly all Sedatives are indicated in Suffocated Excitement excepting Cold, when the extremities are so. — — —

January 9th 1808. Stimulants. I shall divide Stimulants into two Classes; 1st Stimulants properly so called, & 2nd Tonic. The first are used in Disease, & the second in predisposing Debility. Stimulants are obtained from the Animal, Vegetable, & Mineral Kingdoms. They act by converting excitement into excitments. When ever Stimulants increase the frequency & diminish the force of the Pulse, it is an infallible Sign that they have been given too good, & they of course should be discontinued. They remove morbid Action, by exciting a new & more powerful Action. Before Stimulants are given the disease should be reduced by the force of your Remedies. This accumulates

the Excitability & affords a greater surface for them to act on. Doct. Sydenham used to exhibit a vomit or a purge in all Chronic Diseases before giving Stimulants. Where Excitability is greatly accumulated, Small doses should be given; but when there is no accumulation large doses are proper, as there is very little for them to act on. They are proper in the beginning of fever. — Do not combine too many Stimulants. To this rule there are some exceptions. Stimulants should be used in rotation; when one has lost its effect by Habit, use another, and when all you have used fail to produce the desired effect, begin again. The part to which Stimulants are applied should be varied. When the Stomach rejects them, apply them to the Skin, & by injection. Bark when rejected by the Stomach, exerts a febrifuge power, when applied to the Skin.

In Health the Excitement & Excitability are equally diffused over the whole Body. — In Disease, they are partial. The Indication of Cure, is to diffuse & equalize them.

Morbid action in any part should be removed or translated to another where it would be less dangerous. a natural Inflammation is to be cured by an artificial one. Headache, by creating a Diarrhoea. a severe flogging will cure an incipient Aprophy. I shall hereafter ap-

ply these facts to the removal of Disease. Before
you trans late Morbid excitement, you must
leave the predisposition of the Patient. When
Morbid Action becomes languid, review it, or
translate it to another part. — In doing which,
avail yourself of the knowledge of associated
motions. Stimulate the arms to excite the Legs.
the Skin, to excite the Stomach. The bond of
sympathy between the Skin & Stomach is too
great to be dissolved readily. In translating Mor-
bid Excitement, you should always take care,
that the part in which you create Morbid Ac-
tion be less essential to life, than that from which
you translate it. Palsy in one arm has been
cured by stimulating the other. Synapismus appli-
ed to the ball of the great toe will remove the
Gout from any other part of the Body. This is the
weakest part, & is generally first affected in this
disease. Tetanus may be cured by drunkenness. —
The Stimulating Passions are useful in some dis-
eases. Hope & Faith have great effect in many
cases. — And the arrival of a Friend has turned
the Scale in favour of life in a low state of He-
alth. Those Medicines which prevent disease are
Tonics. They remove predisposing Debility,
1st. we should use them in small doses in sim-
ple Debility, then when it is attended with some

I have heard of
Disease. 2nd we should prefer those that are durable, & of those, Aliments are the best. 3rd Such food only should be used, as is agreeable to the Stomach, & grateful to the Taste. 4th It should be taken fine or Six times a day, and two or three times in the night. This is the way to give Medicine, & is the way we should give food, when it is converted into Medicine. 5th A full meal should be avoided in all cases of Debility. 6th Solid should be prefered to Liquid, & salt to fresh food. — 7th Food not very nourishing should be used in simple debility. 8th One dish only should be eaten, whether of flesh, fish, or vegetables. A diet of Milk & Bread has cured Gout. 9th When we wish to give a limited quantity of food Eggs & Milk are best. 9th The hours of eating should be regular.

Drinks are regular, warm that — here the Doctor, he capitulated his lecture on drinks, for which see, these notes on Pathology.

January 10th 1808. The Diet should always be accommodated to the Excitability of the System. If the Excitability be accumulated that sort of diet which is not very Stimulating should be used, and vice versa. Exercise holds a high rank among the tonic Remedies, it is of three kindz —

Active, Passive, & Mixed. Friction, the Cradle,
the Chamber Horse &c. — Friction promotes Secretion.
Boorhave advised the Daily use of Friction of the
limbs in Cases of Debility. A Farmer, Governor of
this State cured himself of Consumption by rowing
himself up and down the Schuylkill several times
a day. I have known a Consumption in our Hos-
pital cured by Swinging. Sailing creates a disease
of the Stomach, which dissipates other diseases, and
by Shaking the Stomach renders it more fit to per-
form its functions. The Balloon will hereafter
become an excellent remedy. Riding on horse-
back is a Mixed exercise. It expends less Excite-
bility than walking, & should be preferred to it.

In all kinds of exercise, it should be our
first care to avoid fatigue. The good old rule,
"that it should always be accommodated to the State
of the Body." It should never be used before Breakfast,
nor immediately before after Dinner. Labour
removes Debility when properly conducted. Habitual
Debility is often removed by a Change of Oc-
cupation. Change of Clasp is also serviceable. Change
of Diet. It is immaterial what a man has been
accustomed to live on: Change it from bad to
worse. It removes predisposing Debility, & thereby
prevents disease. Change of Exercise. After Walking
has brought on Fatigue in a healthy person, if he
will take a Log or something else on his Shoulders

I have heard at -
and after a while lay it down, he will feel less fatigued, and will be more able to continue his journey. Walking recruits us after Standing, twice verber. Travelling is an agreeable stimulus; it has several advantages. It presents a constant succession of new & agreeable objects, & removes us from those, with whom we are accustomed to converse concerning our diseases. Change of Climate is very useful in Debility or Disease of weak Nervous Action. Life is protracted many years by it. Epilepsy, & even the Stone have been cured by it. Change of Climate has fixed the Teeth in their Sockets, after having been loose, & has renovated the Hair, after having been ~~loose~~ & fallen off. Conversing on our diseases is very injurious. It has converted Churrhous Tumors into Cancer. Many People have been cured by ceasing to complain. A Gentleman once promised a Lady a Dollar for every day as long as she ceased to complain. The Lady was offended, ceased to complain, & recovered. Mineral Waters have been reckoned powerful remedies in all ages & countries. They act by their ingredients, their Temperature, & their quality. They act more on Secretion & Excretion when warm, than when cold. The Sea Shore has been highly recommended; but it is very hurtful in great arterial excitability. The lives of many patients in this State, have been destroyed by exercise.

Matrimony acts powerfully as a stimulant & tonic. Charitable Society, & reading pleasant Stories are serviceable. We should advise our Chronic Patients to go to bed early, & always at the same hour. The Philogist heated air produced by the burning of Candles, renders sitting up at night unwholesome. They should always sleep on one Side or other. Sleeping on the Back produces Incubus. Feather beds relax & thereby induce Debility. A Mattress should be purfled. Blankets are too heavy for covering. Fine down between ticking should be substituted for them. It affords great warmth & is very light, a patient had better be two or three degrees too warm, than one too cold. Flannel should always be worn next the skin, in cases of Debility. Ladies should wear it under their petticoats. Intoxications to them who have not been accustomed to it, is of advantage. It rouses the latent excitement, & locks it up in every Muscle of the body. Tobacco in its various forms, of Snuff, Segars &c. is to be used sometimes. But not by those persons who had used them before. In the Management of all these remedies; great care is necessary — Always recollect, Gentleman, that Debility is the threshold of Disease.

I have hitherto spoken of that Debility, which allows of Motion. But there are cases in which no Motion can be performed. Asphyxia from cold may be cured by immersing the body in water at its natural temperature. This, though cold, is warm in comparison

I have had

to the Mortid Coldness of the Body.

In Gangrene such remedies should be used, as act on the adjoining parts, & enable them to throw off the Mortified parts. Dr. Physick has taught us that blisters are the best remedies in Cases of Gangrene. Stimulant remedies are given in four ways: viz. By the Mouth, Nose, Anus & by the Skin. Volatile Alkali acts on the whole body by means of the Nose. Dr. has cured Priapism, Nocturnal Emissio & Gout, by Camphor & Opium in plaster, applied to the internal parts of the Thigh. I have seen Turpentine &c. act like a Charm in removing diseases of the joints. Tobacco when applied to the Waists will produce Convulsing. Thamomine will have the same effect. A Warm Hand applied for a considerable time has removed pleuritic pain. all external applications act either by Friction, Local Detumescence, or by Sympathy.

We will now speak of those Medicines which mix with, and Neutralize offending Matter. A calculus in the Vesica Utrinaria is dissolved by an Alkali. The Sulphuric Acid is said to be decomposed by uniting with a calculus Base.

Medicines which remove Disorders. - Obstructions of all kinds are Disorders. They react & produce disease. Medicines which cure obstructions are called Deobstructants. Arsenic acts powerfully on all obstructions. Certain Tonics, as Steel have

cured Serophila. This has also been done by feast. In this Manner I suppose the Royal touch to act in curing Serophila. Much has been said by Doctor Beddoes & others about the beneficial effects of certain Gasses: But they are generally and justly Neglects. Patients apparently relieved by them always relapse. In Consumption, they are said to prepare the way for Tonics. Probably the Nitric Oxide would be serviceable in Medicine. Those Medicines which relieve pain itself are sometimes a remedy. There are many instances of its fatal effects, Death, in Colic, may occur without inflammation. In such cases, I say that morbid excitement transcends in force, that which produces inflammation, & produces Death. Pain in Nervous & muscular parts is relieved by Opium; but this should not be given while there is much arterial action. Fasting prevents pain. Cold water relieves it in cases of high excitement. Cold water or Ice, when applied to the Head (in Bladder) cure Headache, when it depends on great morbid excitement.

It is a powerful Anodyne in pain from piles. Pedilievium in slight indispositions induces sleep. Gentle friction with the hand relieves the pain of Colic. Fear drives away pain, when attended with high action. Irritating language enables us to endure Torture without complaining. This is one reason why Indians can endure the most excruciating torture with such fortitude.

I have heard of

Pain when it depends on great arterial action is more rapidly relieved by Bloodletting than by any other remedy. Fasting also, is a remedy for pain. Certain Demulcents, cheerfulness, gentle friction, and producing morbid excitement in another less vital part. It is a general practice for attendants to advise patients not to complain; but this is a wrong practice. Noise that makes great impression on the ear acts as a gentle Anodyne. You will seldom hear two children cry at once. The one that cries loudest soon silences the other. Warm Water is an Anodyne. The pediluvium eases pain. The application of tight Bandages will sometimes relieve Belly Ache - Head-ache &c. Hallowing or making any violent exertion will ease pain. Hard pressure & pressure relief by groaning. A roll of Pulphus held in the hands, will in certain cases relieve pain, & a Crackling noise will be heard. Metallic points act in the same manner as Counting 100 backwards. They concentrate the mind to one object, & thereby procure Sedation. A few words on the means of attaining Longevity shall conclude this part of our course. We have seen that life is the effect of impressions. The secret of preserving it then, consists in the proper application of Stimuli. They should always be adapted to the Sensibility. There are no remedies that can be said to be positively good for any disease. They are only relatively good.

There is a system in Medicine, as in Language
In order to be a successful practitioner, you should
always accommodate your remedies to the force
of the Disease — As to make good Latin, the Ad-
jective must always agree with its Substantive, in
Gender, Number, & Case.

End of Therapeutics

I have heard of

Of the States of Fever which are universal, or affect the whole arterial System. They are the

Malignant,
Gangrenous,
Synochus fortis,
Synocha,
Synochula,
Synochoid,
Hyphoid,
Synphus,
Hectic,
Intermitting,
Febricola.

of the remedies for preventing the formation of fever, during the existence of its predisposing debility, or premonitory symptoms. They are

1. Fasting.
2. Rest.
3. Gentle Stimulants.
4. Gentle evacuants.

Of the Remedies for fever when formed, accommodated to the above different States, or grades. They consist.

1. Of such things as lessen, by the abstraction of Stimulants, the morbid and excessive

action of the Blood vessels, or excite them when reduced below the point of re-action.

11. Of Shock, as by acting on the Stomach, bowels, brain, nerves, muscles, and Skin, equalize the excitement of the whole System, & thereby indirectly destroy a weak action in the blood-vessels, by imparting to them a more vigorous & healthy action.

1. The remedies which belong to the first general Head, are

(a) Evacuants. These are

1. Bloodletting.
2. Vomits.
3. Purges & opening Elixers.
4. Sweating Medicines.
5. Medicines which excite a Salivation
6. Blisters.

161 Remedies which abstract the Stimulus of heat. These are Cold, in the form of

1. Air,
2. Water, and
3. Ice. also, abstinence and

all those remedies which abstract the Stimulus of sound and light, by

4. Darkness
- of invigorating passions, by
5. Moderate fear.

of Motion, by

b. Rest.

of Avermancy, by

7. Diluting drink, & cleanliness.

(c) Remedies which divert local morbid excitement, congestion, inflammation, & serious effusion from parts that are essential to life in the first degree, to such as are less essential to it. These are all such as are mentioned under the head of evacuants; also

1. Nitre and other neutral salts.
2. Certain preparations of Antimony.
3. Sugar of lead.
4. Fox glove.

5. Applications to the external surface of the body, of Nitre, dissolved in Vinegar, also Sweet oil.

II. The remedies which belong to the Second general Head are Stimulants. These divide themselves, naturally, into such as are internal, and such as are external.

(a) The internal Stimulants may be divided into Medicines & Aliments. The medicines are

1. All fermented and distilled liquors.
2. Volatile alkali.
3. Empyrealiatic & Aromatic oils; also

Certain fatid animal & vegetable Substances.

4. Opium.
5. Ether.
6. Balsam, & bitters of all kinds.
7. Mercury.
8. Pure atmospheric Air.
10. The invigoration of the Nervous & Understanding.
11. Stimulating injections into the bowels.

The Aliments include such vegetable & animal matters as are commonly used in diet, together with Saloosp, Tapioca, and the like.

(b) The external Stimulants are

1. Several of the internal Stimulants, so prepared as to be applied to different parts of the body as the nose, the temples, limbs, & the external regions of the Stomach and bowels.
2. The Cold & warm baths, by lotion, or application of the water over the whole body.
3. Blisters.
4. Cataplasms of onions, garlic, & mustard to the feet.
5. Certain applications calculated to irritate and inflame the Skin.
6. Caustics.
7. Boiling Water.

of the treatment, proper during the convalescence from fever.

of Critical days. those are enumerated by
Sydenham viz. on the 3. 5. 7. 9. 11. 14.
17. 20.

of the Signs which indicate the issue of fever
in life and death. These Signs appear in

1. Partial debility.
2. Pain.
3. General, or partial Heat & coldness of the
body.
4. Thirst.
5. The Pulse.
6. The tongue.
7. The eyes.
8. The ears.
9. The sense of touch.
10. The countenance.
11. Respiration.
12. The voice.
13. Different positions of the body.
14. Different States of Susceptibility, & irritability.
15. Different States of appetite for food.
16. Different States of the bowels.
17. Different States of the Secretions & excretions.
18. Different States of the faculties of the
mind.

Of those States of fever which affect the
whole arterial System, but appear with

greater morbid excretions in some parts than others. They are the

Sweating,
Fainting,
Burning,
Cold and chilly,
Piticular.

In which are included,

Intestinal { Diarrhoea,
Dysentery,
Cholera Morbus, and
Colic

In which are included,

Pulmonary { Pneumonia,
Catarrh, and
Pulmonary Consumption.

In which are included

Eruptive { Small pox,
Measles,
Erysipelas,
Miliary fever,
Chicken pox, and
Pomphigus.

In which are included

The Malignant sore throat,
The Scarlet fever sore throat,
The Cyananche trachealis, or
what is called Croup & Hives,
The different forms of Purple
inflammatory sore throat.

Auginos

Rheumatic,
Arthritic,
Cephalic, in
which are included

Phrenetic,
Maniacal,
Lethargic,
Apoplectic, and
Paralytic.

Hydroptic, in which
are included, effusion
of water, accompanied
with morbid action in the blood vessels,
into the

Brain,
Lungs,
Cavity of the Thorax,
Cavity of the Abdomen,
Ovaria,
Scrotum,
Testicles, and,
Lower Extremities.

Hemorrhagic, in which
are included discharges
of blood accompanied with
morbid action in the blood
vessels from the

Nose,
Lungs,
Stomach,
Liver,
Bowels,
Kidneys and bladder
Hemorrhoidal vessels,
Uterus and,
Skin.

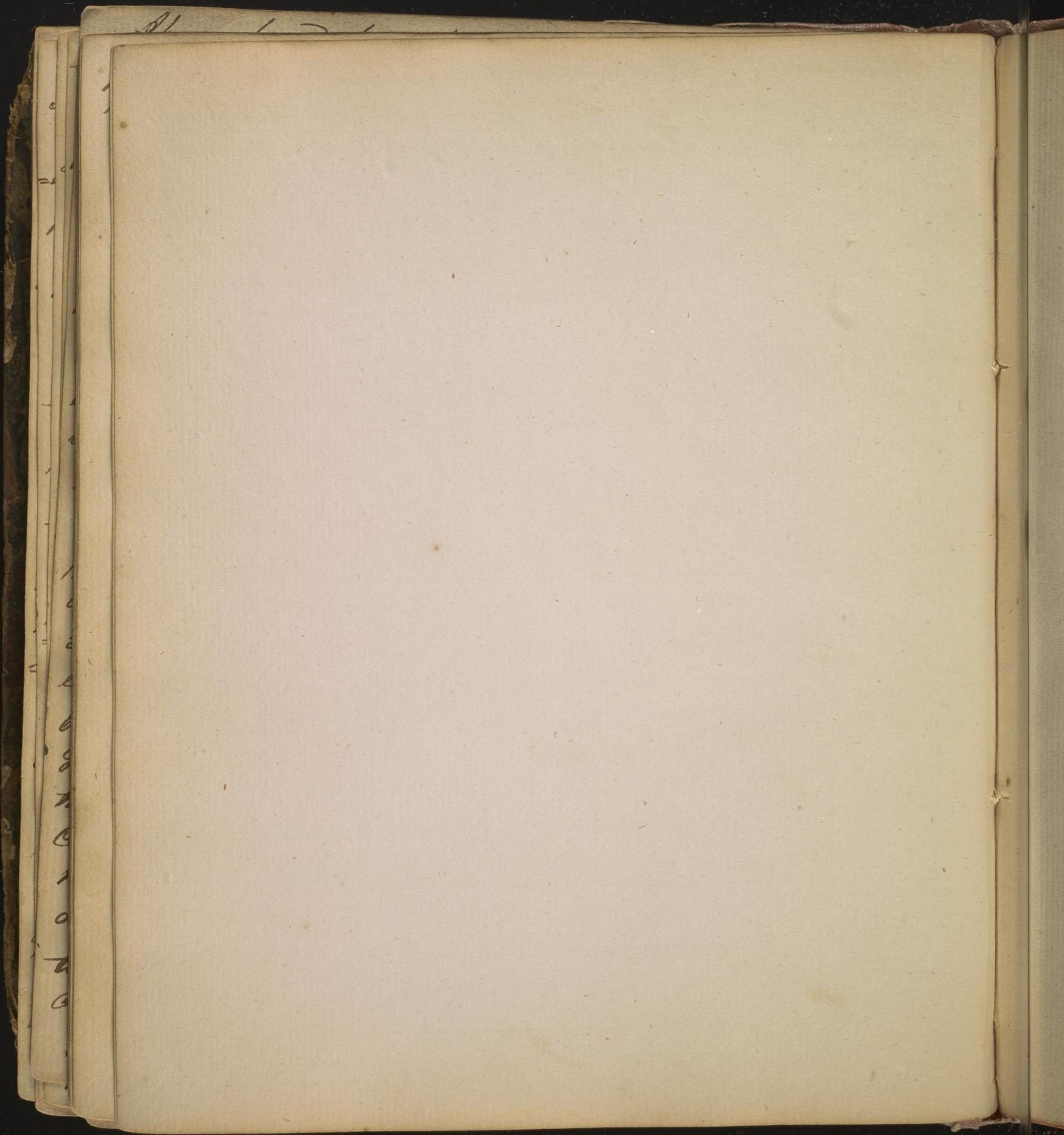
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Of those misplaced States of fever, in which, from the force of the remote cause, or from predisposing debility, morbid action is thrown chiefly from the blood-vessels into other parts of the body, and is either local or general. They are.

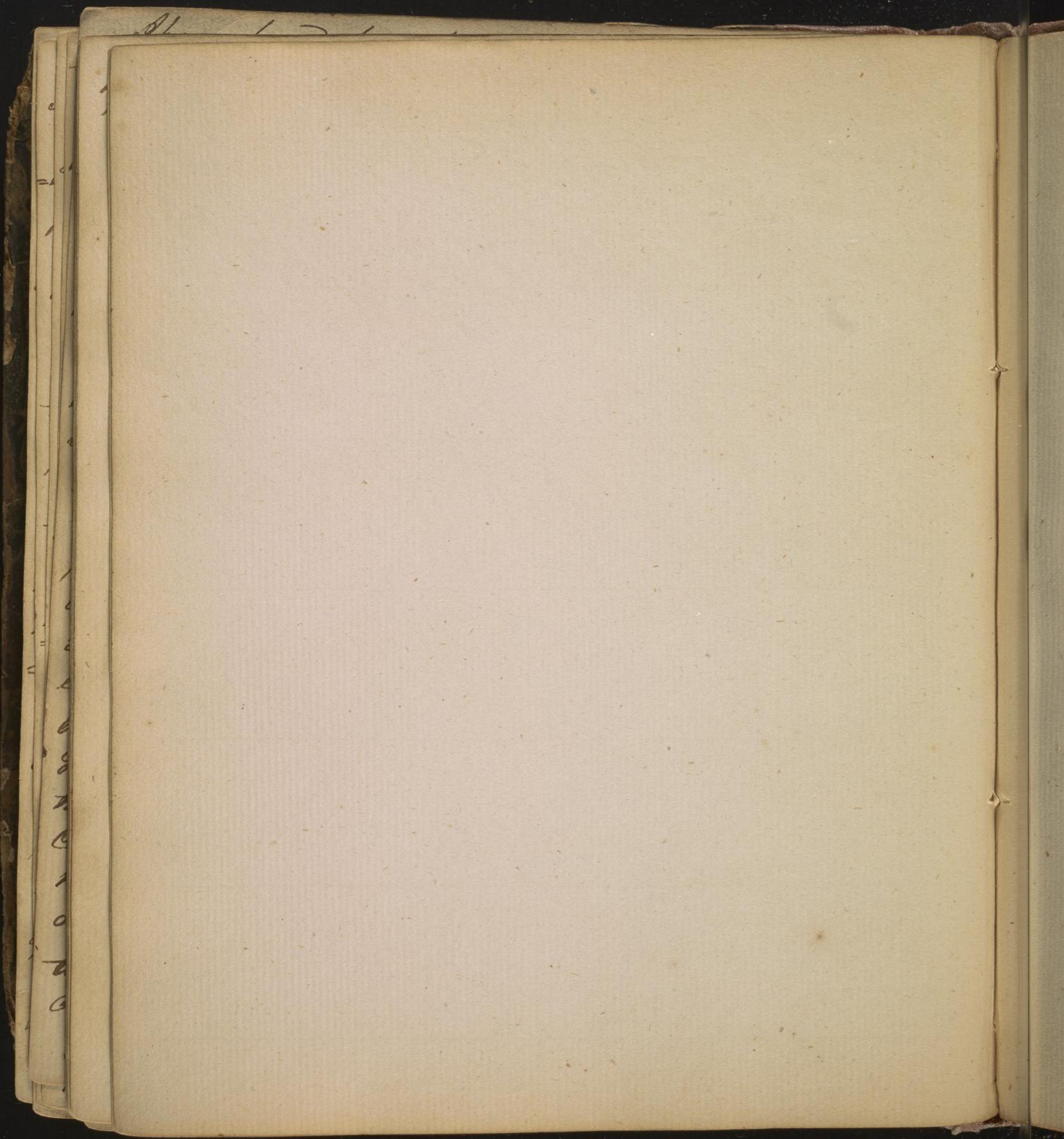
Hepatic,
Hemorrhoidal
Opthalmic,
Odontalgic,
Oral;
Aphthous,
Serophulous,
Scorbutic,
Hysterical,
Hypocondriacal,
Cutaneous.

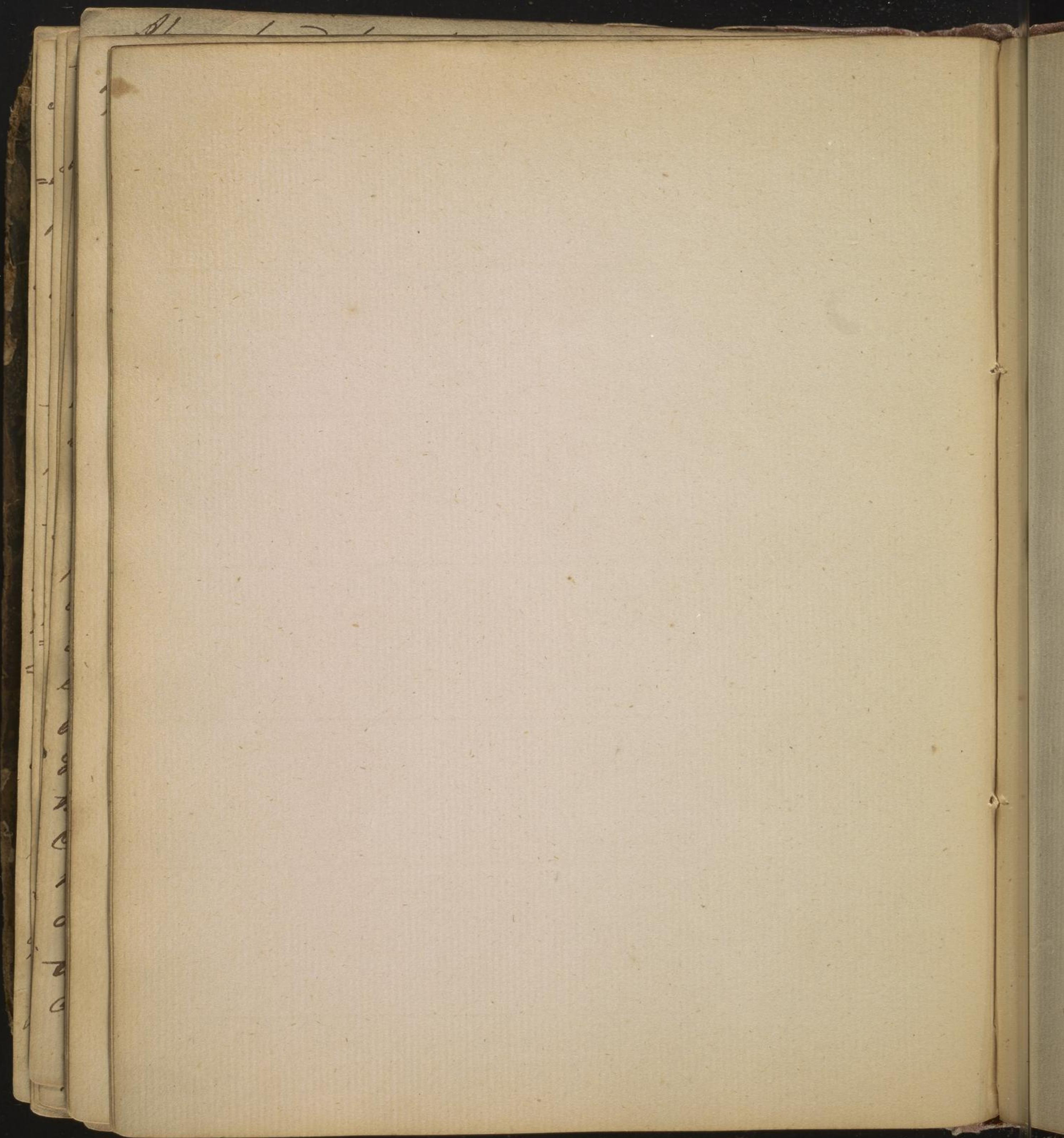
Of diseases as they appear in the blood-vessels, and Nervous Systems (in which are included the Nerves, Musels, brain, and mind), and the alimentary Canal, predominating more or less, according to circumstances in each of them.

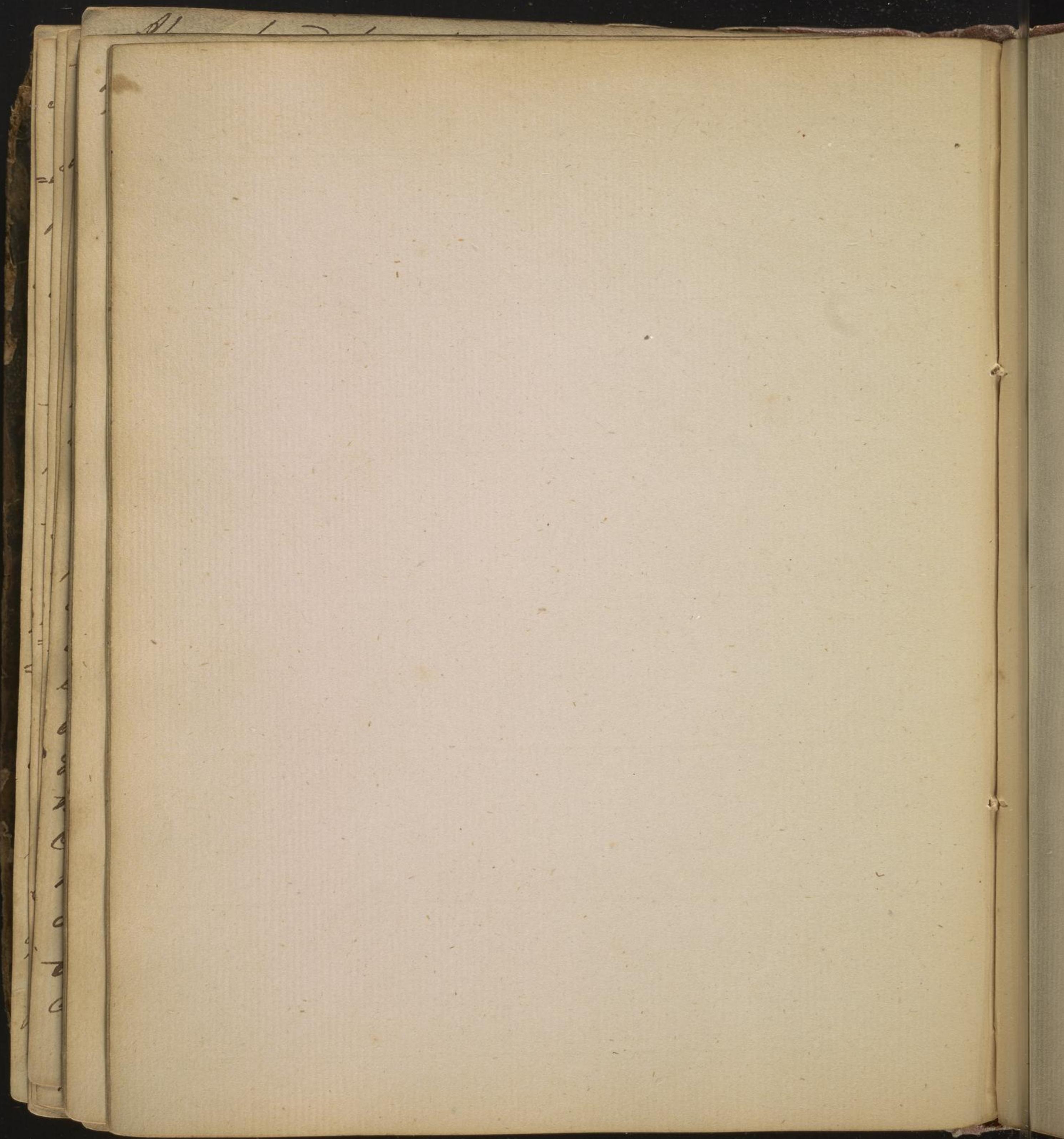
Apoplasy — palsey — catalepsy — Walk-fallen — Head-ach — Epilepsy — Hysteria — asthma — Dyspnea — Angina pectoris — Hooping Cough — Tremor — Convulsions — Tetanus — Hicoria — Hiccup — Cramp — Colic — Diarrhoea — Costiveness — Dyspepsia — Hypochondriasis — Melancholy, or partial Madness — General Madness — Fatty — Defects, loss

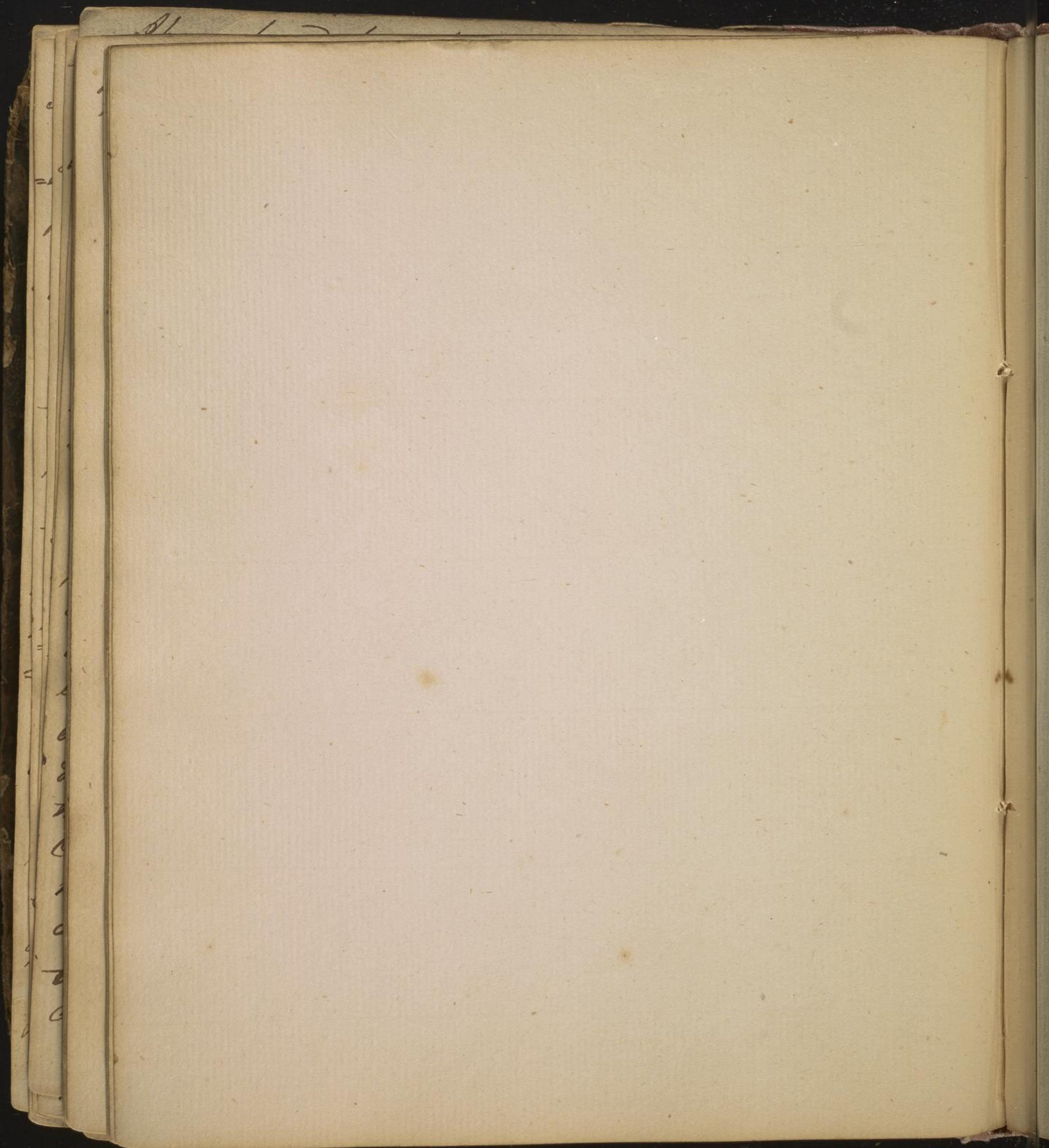
of Memory — Dreaming — Phantasms —
absence of mind — The Operations of the Mind
in a trance — Fainting — Asphyxia.

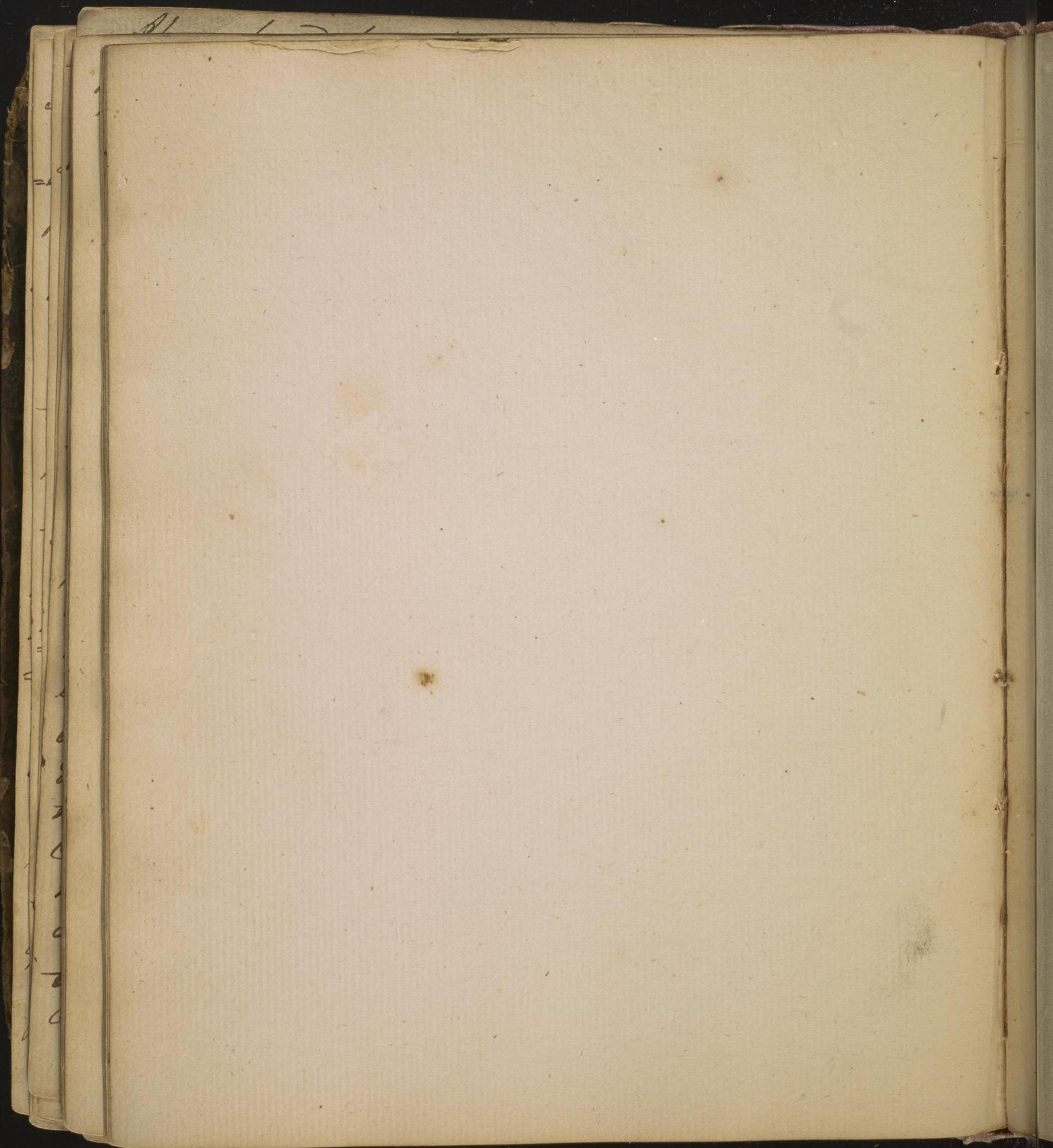


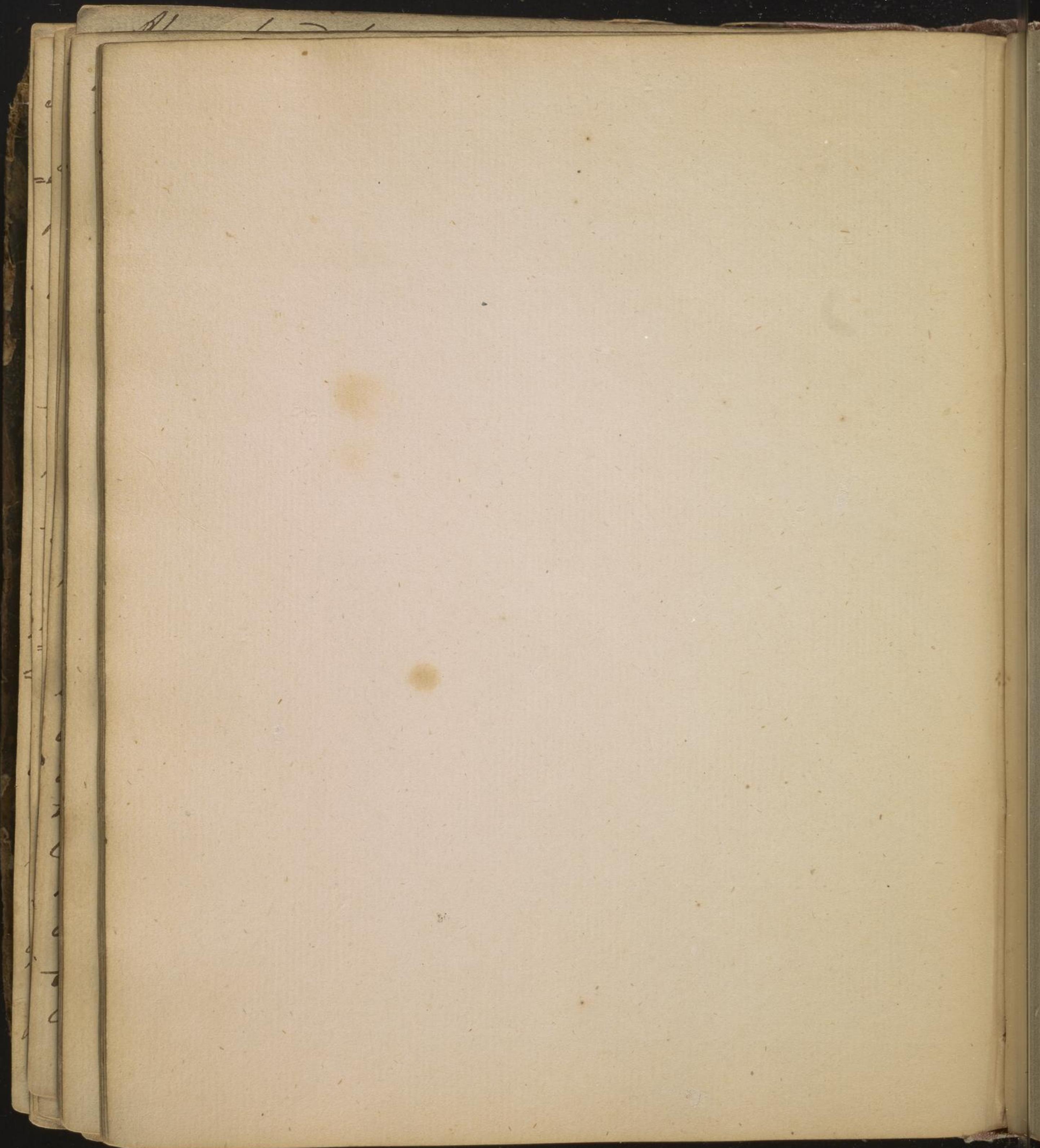


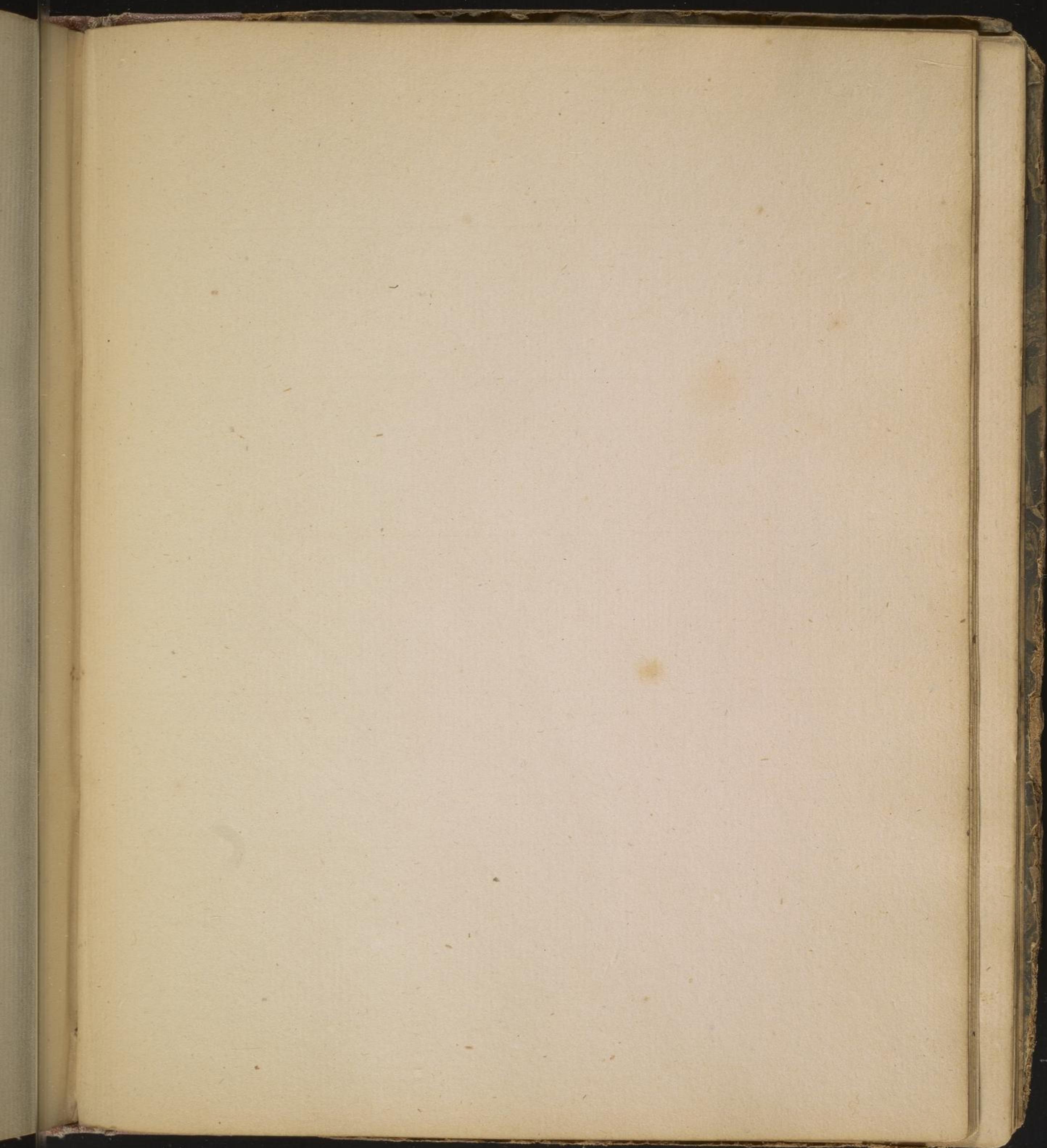


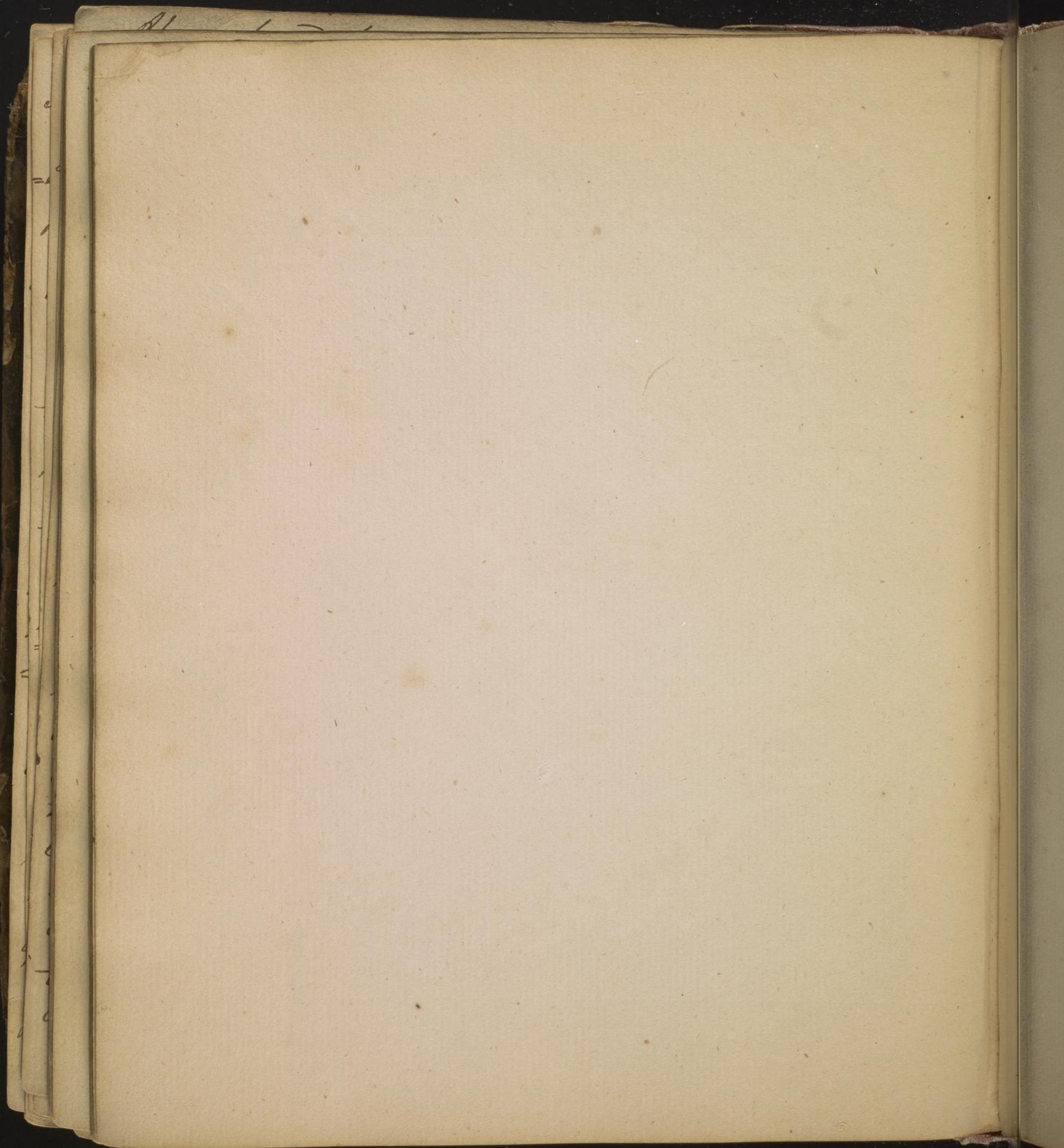


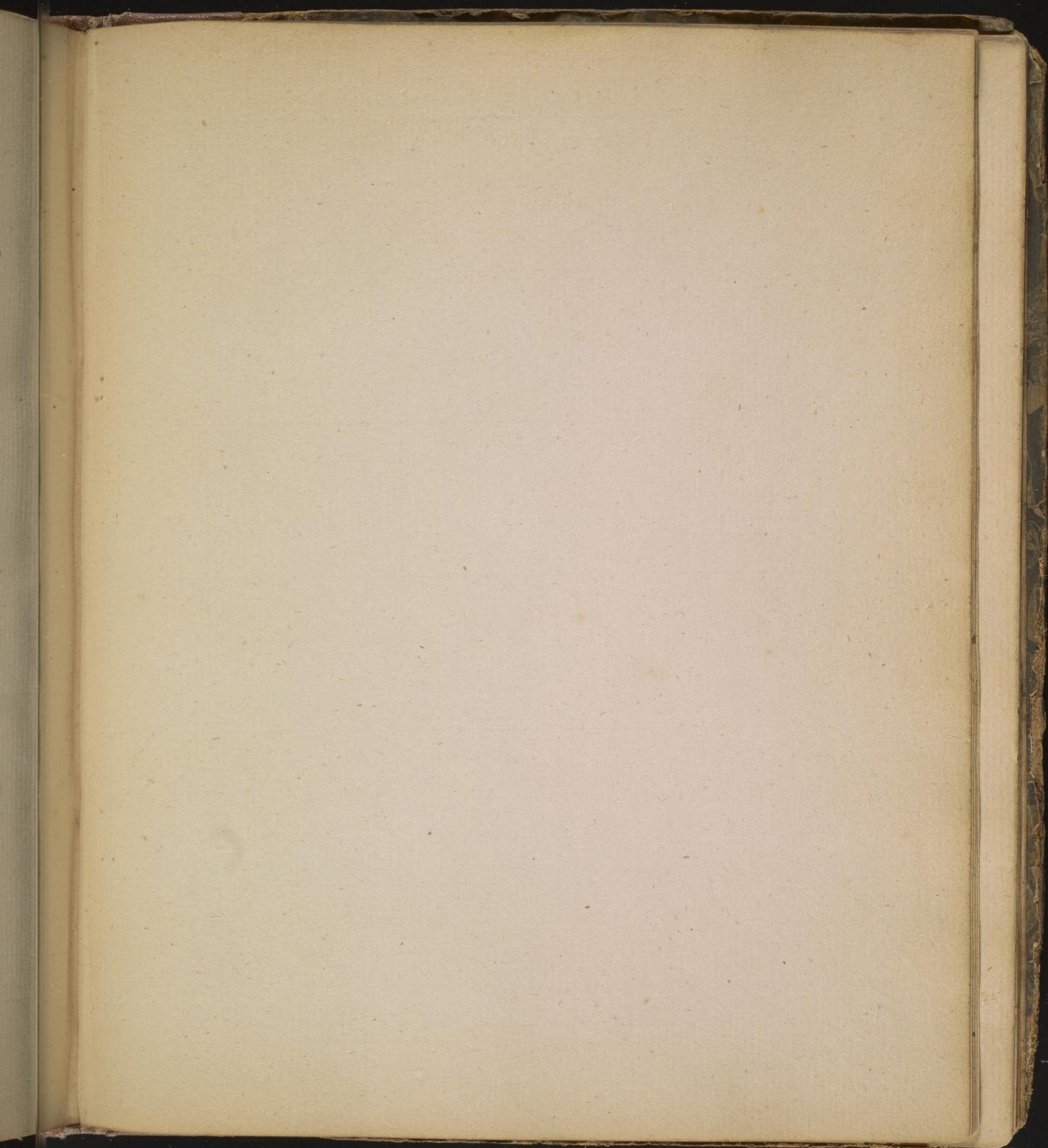


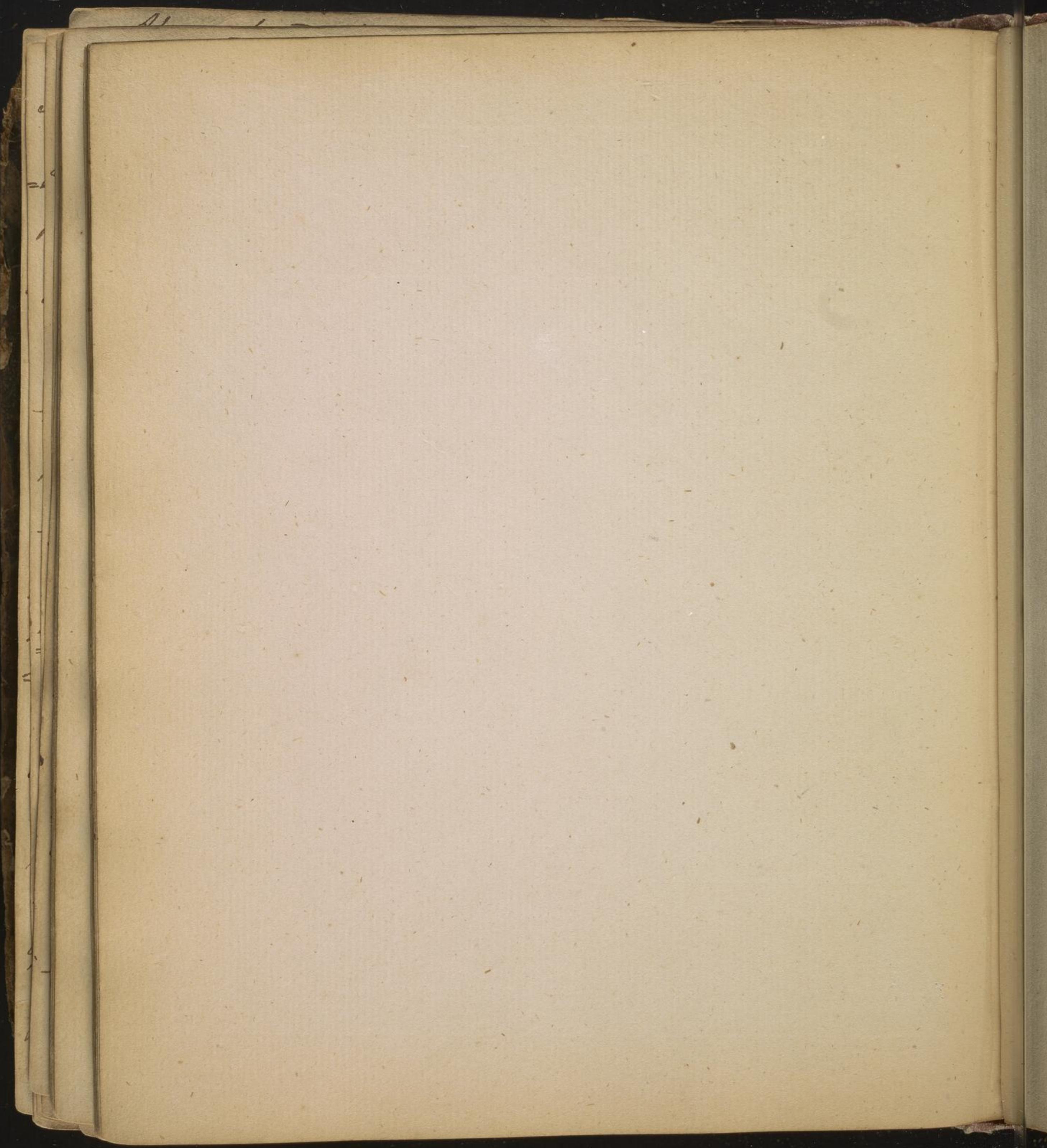


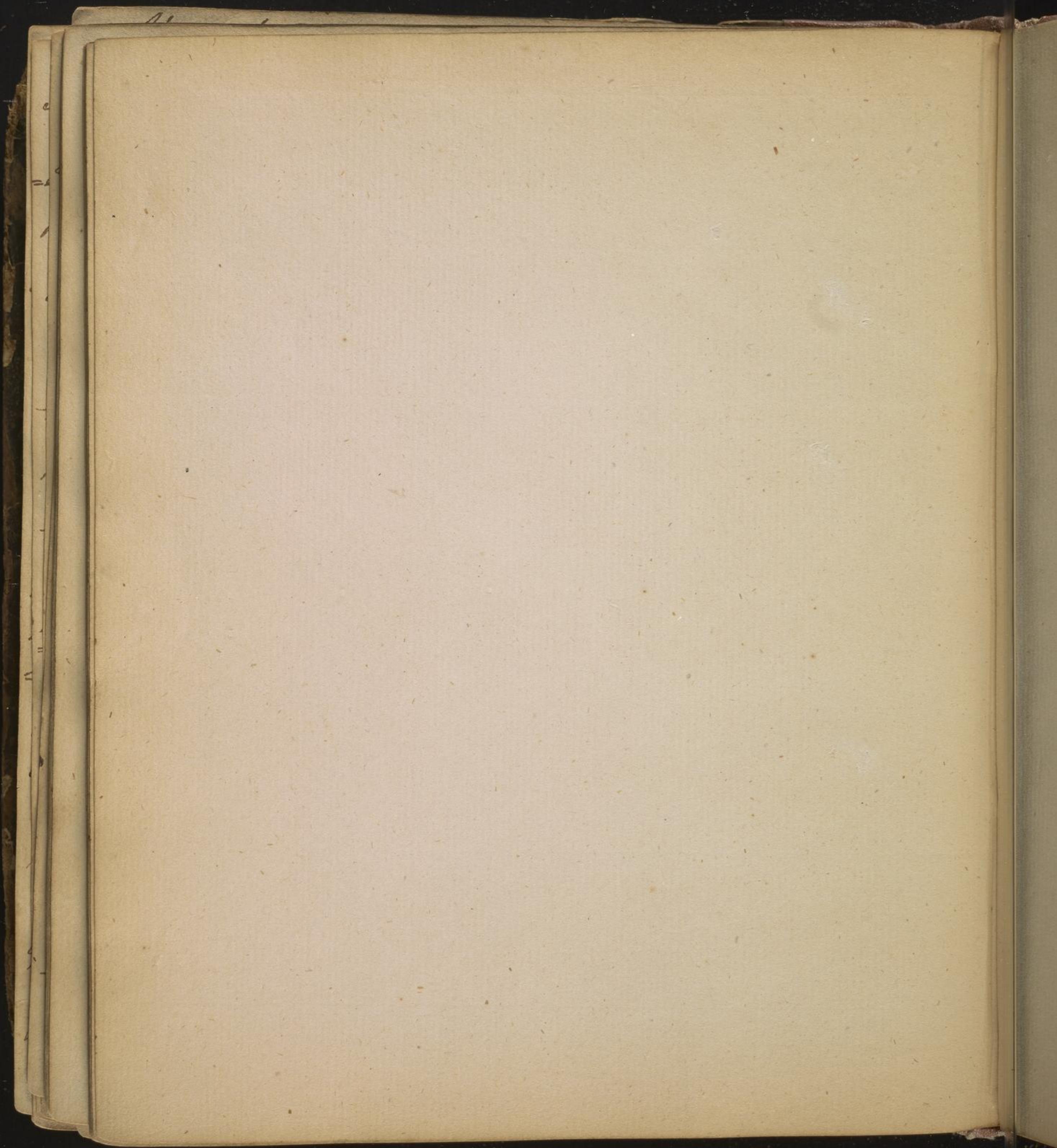


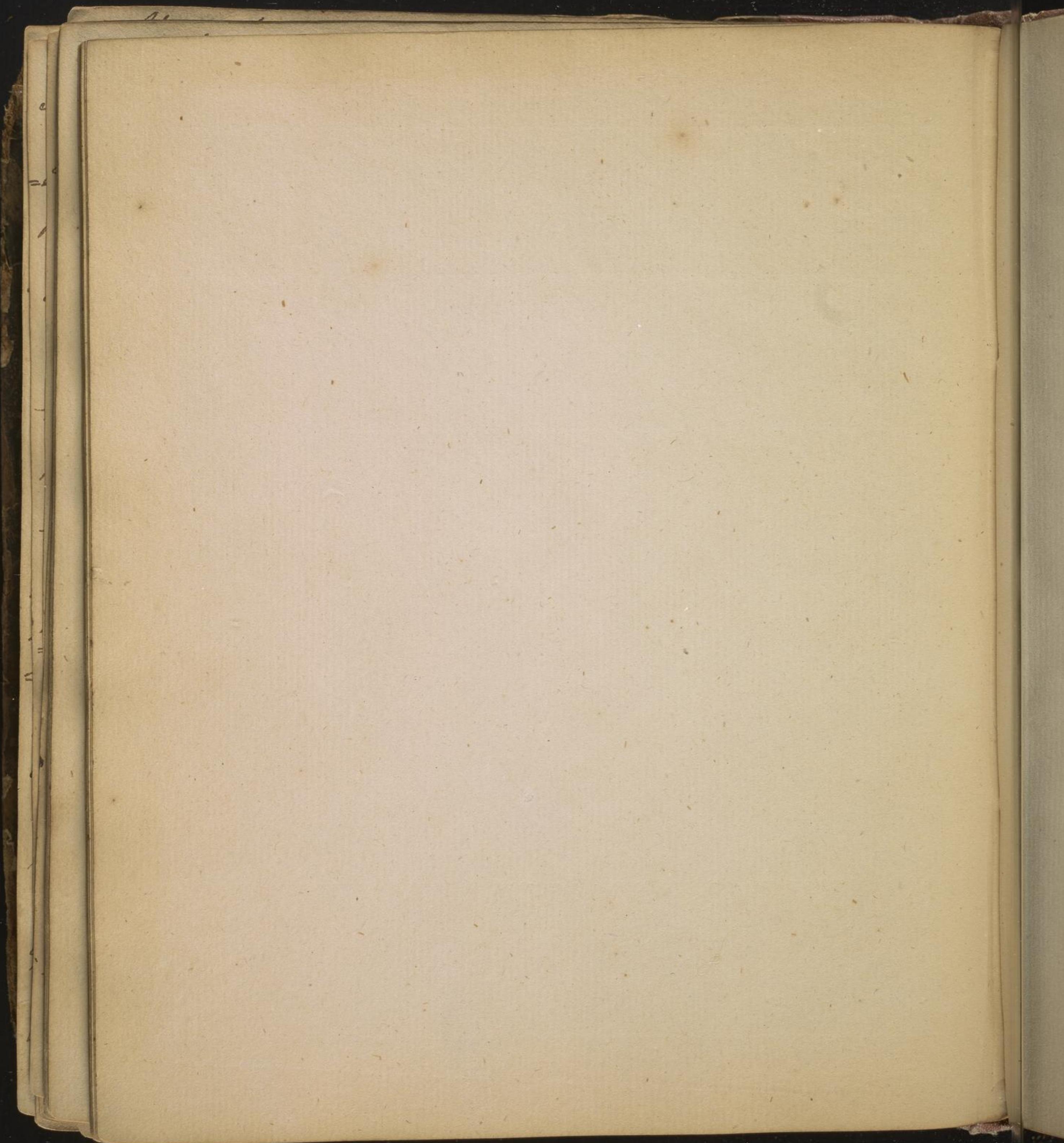


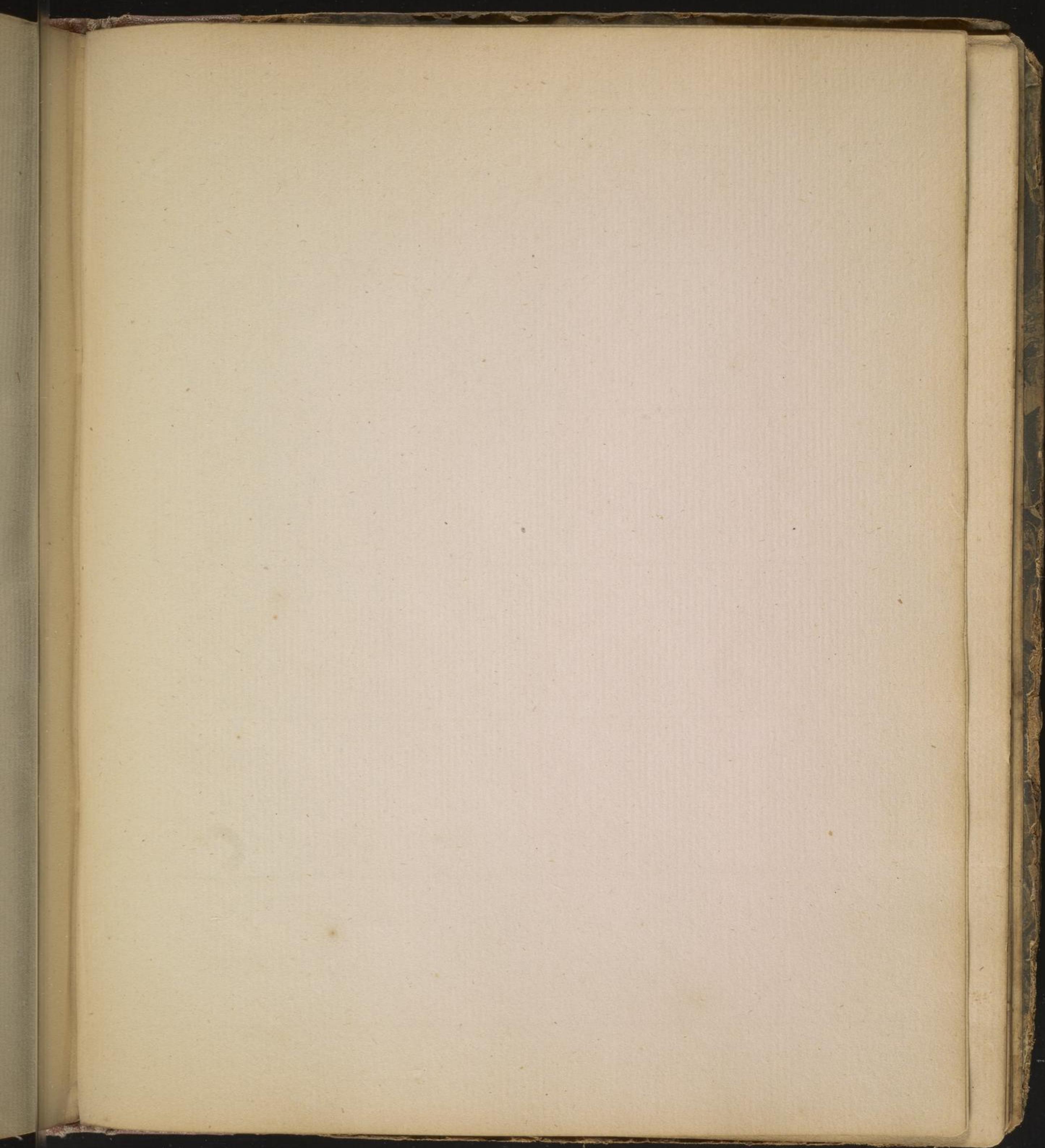


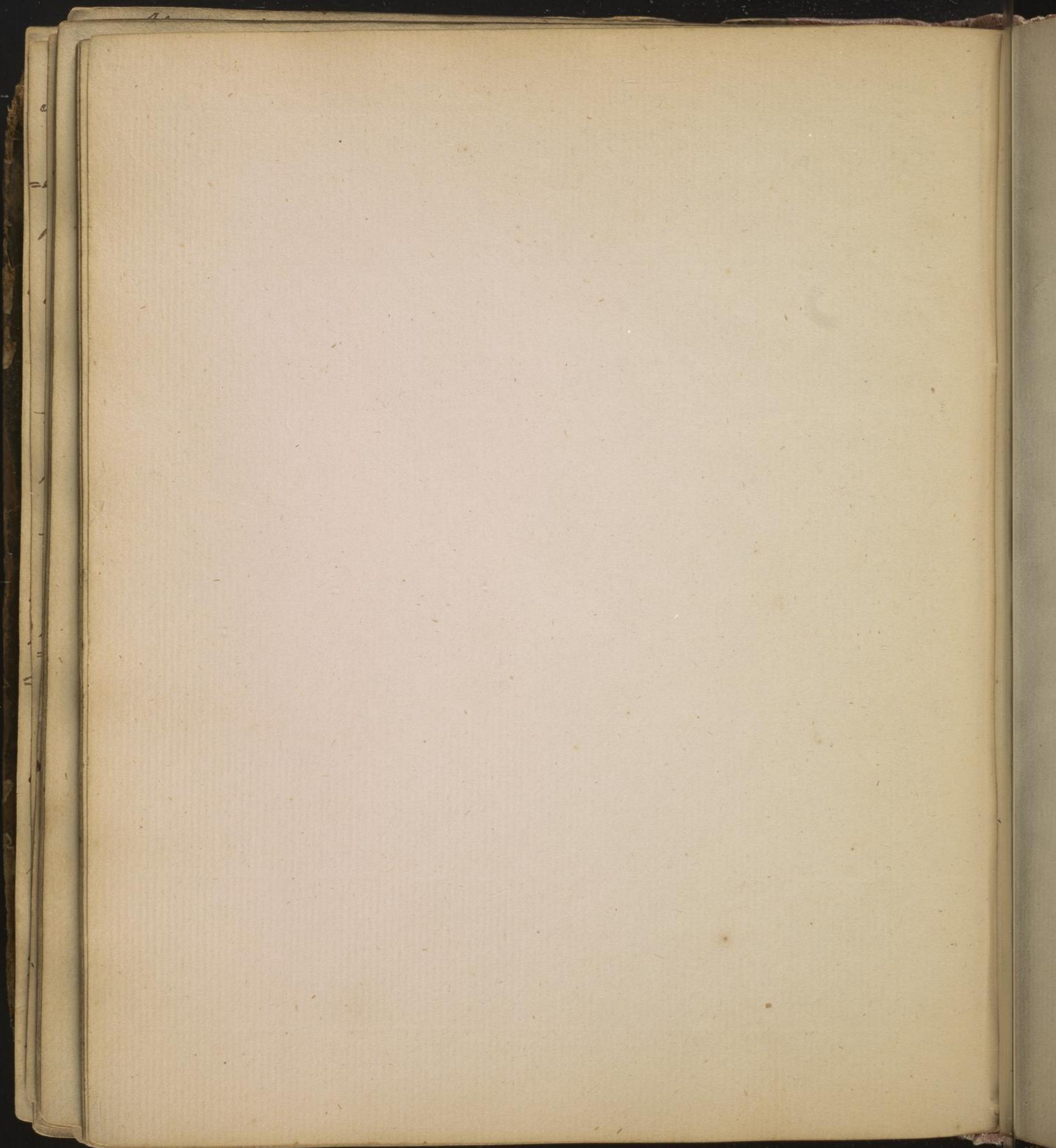


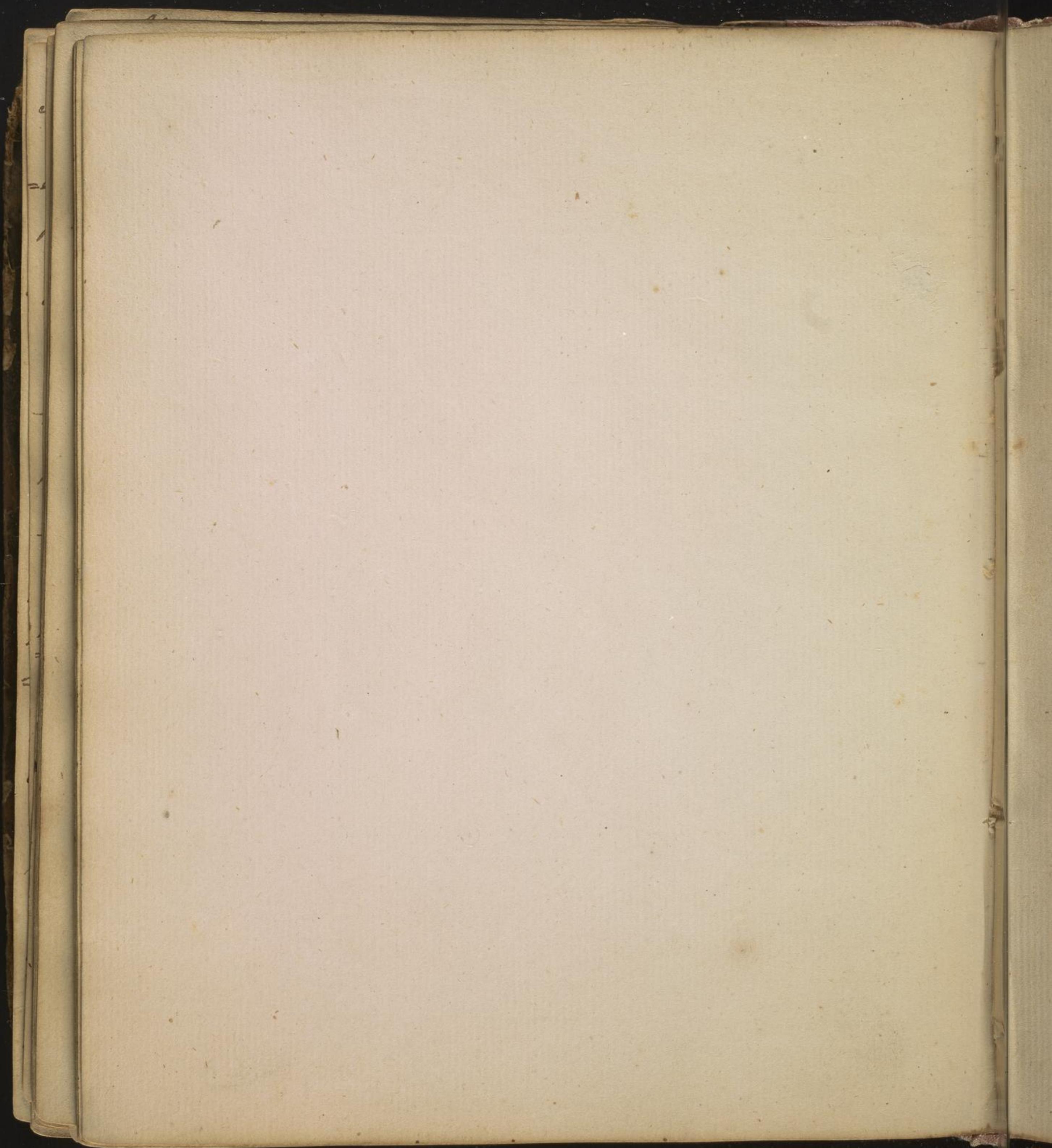


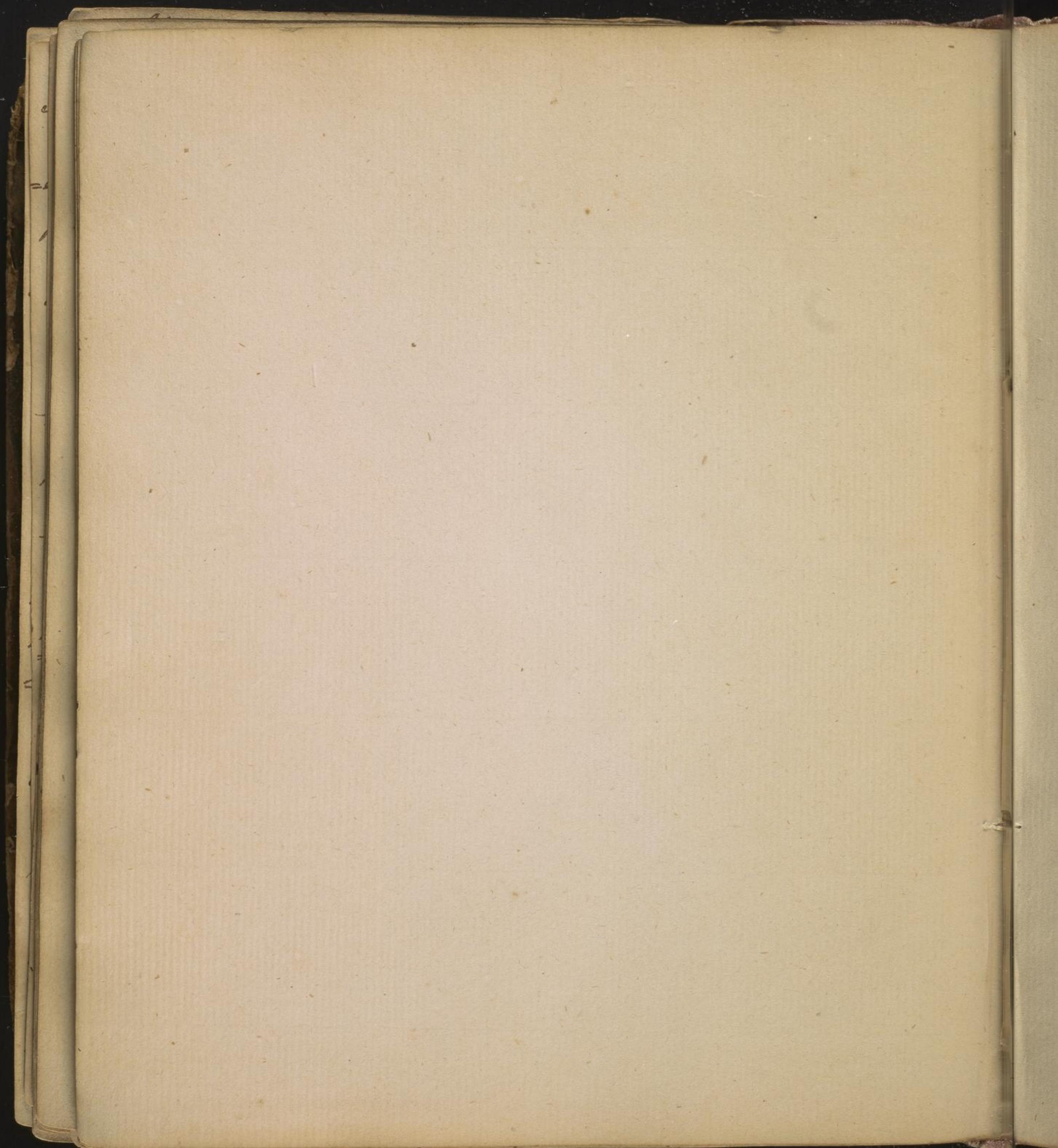


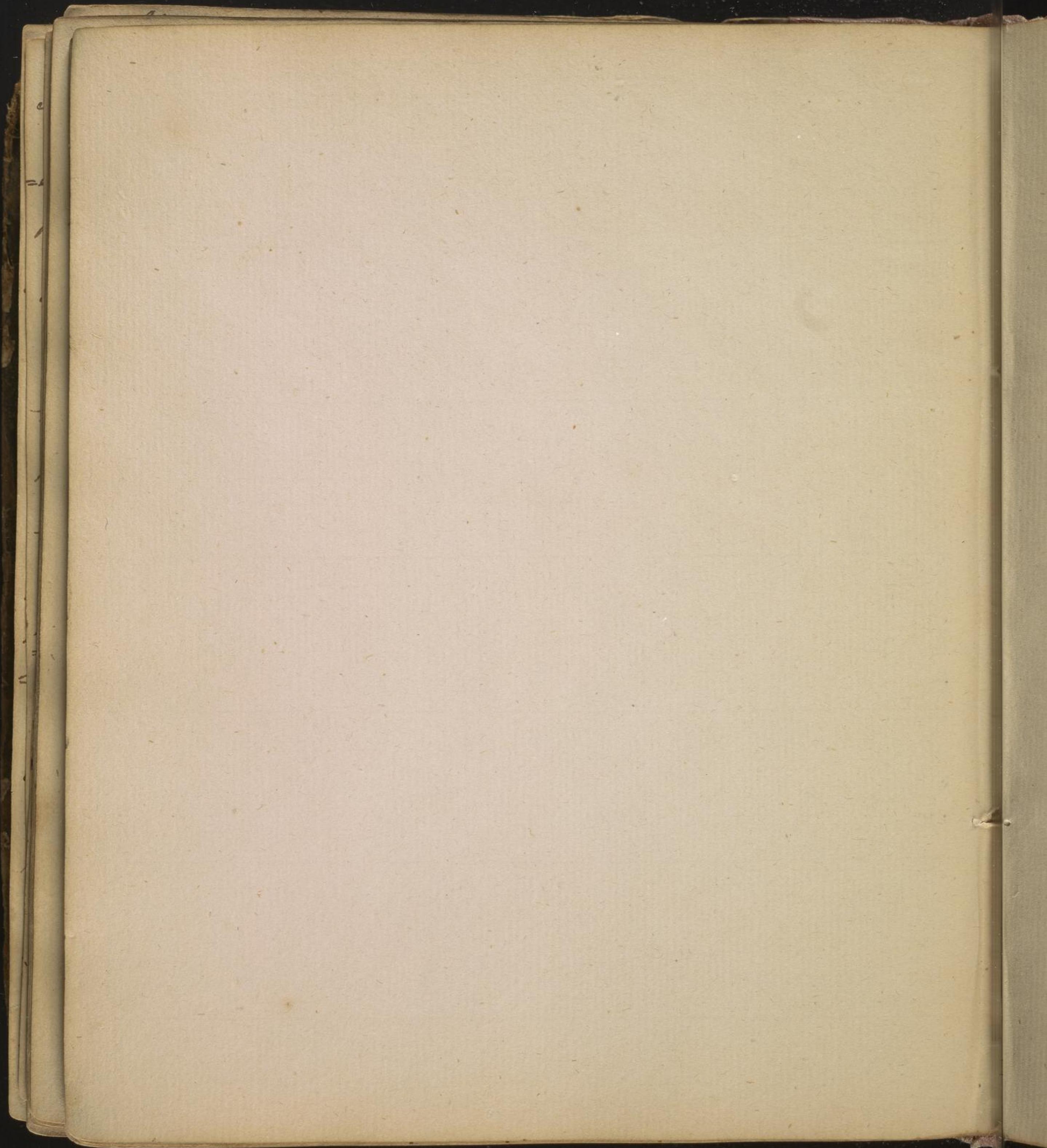


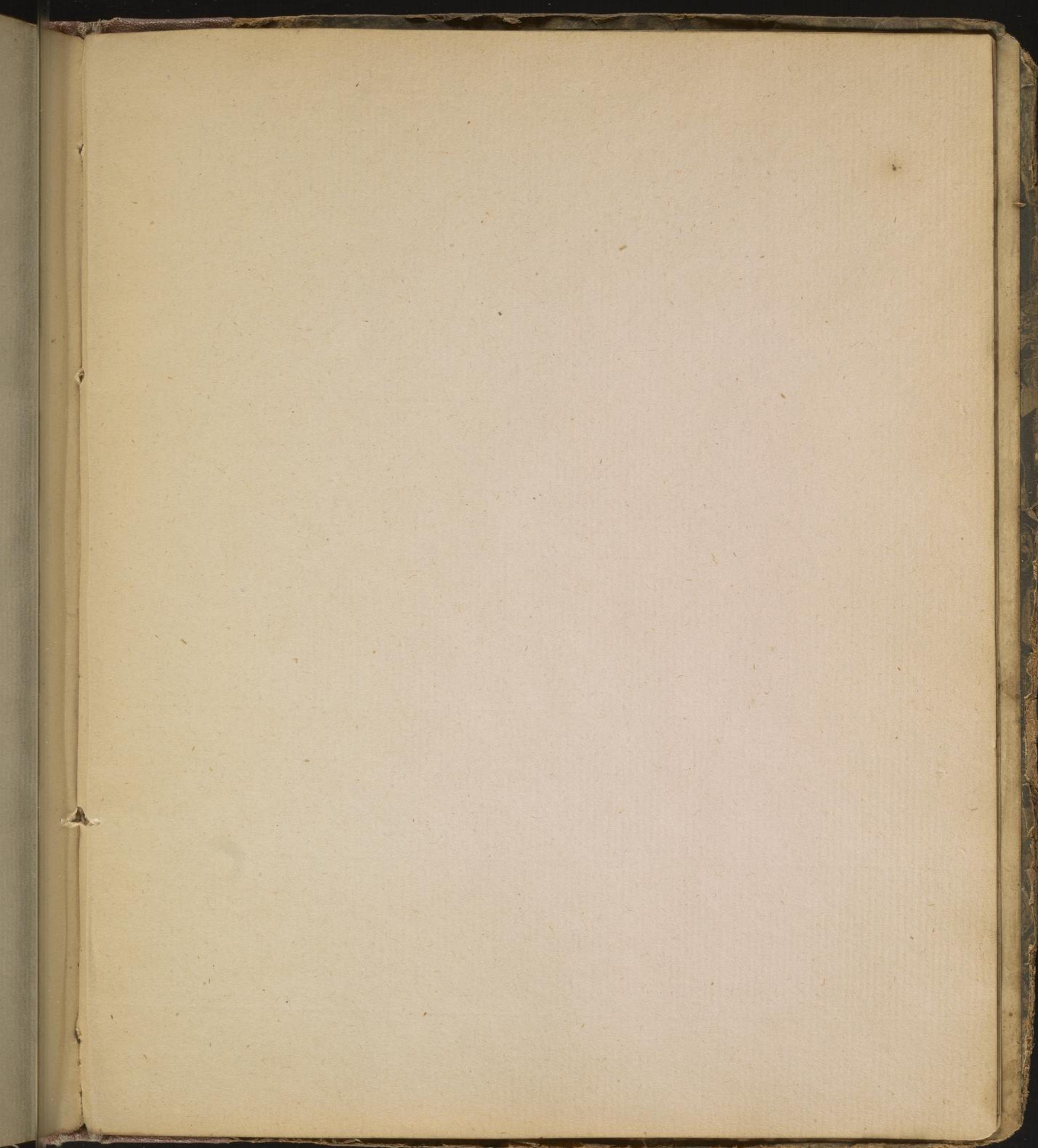


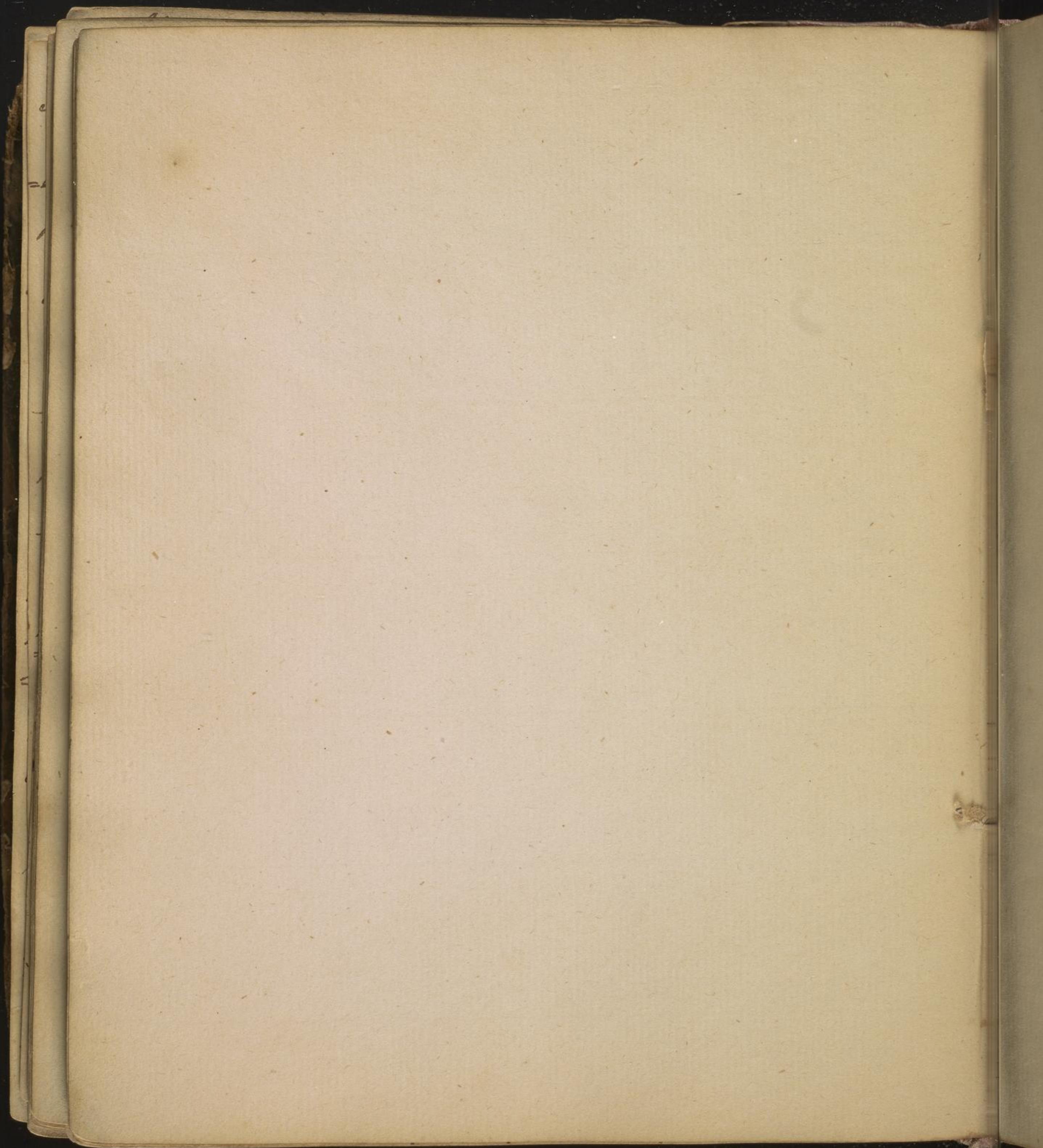












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Gush says Dr. y denham clearly proves, that
whence the monarch y of a single disease was
not immediately acknowledged, by a sudden
retreat of all contemporary diseases, they were
forced to do homage to it, by wearing its living



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